

REMARKS

ON THE

OPHTHALMY,

PSOROPHTHALMY,

AND

PURULENT EYE.

WITH

METHODS of CURE, considerably different from those commonly used; and CASES annexed, in Proof of their Utility: also, the CASE, of a GUTTA SERENA cured by Electricity.

By JAMES WARE, SURGEON.

THE SECOND EDITION,

WITH ADDITIONS.

Oculorum affectus tam varii sunt atque multiplices, ut difficillimum sit, eos perspicuè ac dilucidè enarrare, ab invicemque distinguere.

RIVERIUS.

L O N D O N :

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M.DCC.LXXXVII.

THE MARK

ON THE

OPHTHALMIA

AND

THE EYE

BY

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WITH AN APPENDIX ON THE TREATMENT OF THE EYE

BY

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P R E F A C E.

IN the first edition of these Remarks, the Author acknowledged himself entirely indebted to Mr. Wathen, for whatever might be deemed an improvement in those branches of Surgery, of which it was proposed to treat:—Nor can he omit the present opportunity of again expressing the sentiments of obligation, which he feels, to his friend and partner, for his various subsequent communications, on these and other subjects:—And he flatters himself, that the alterations and enlargements, in this edition, will be the more favourably received
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by the public, when informed, that they are presented with the full approbation of that gentleman.

Several of the cases, which appeared in the former edition, are now omitted, on account of their near resemblance to others which are retained. The fourth, fifth, sixth, and seventh, are new and additional ones. These he has been led to introduce, by some material circumstances, which appear to render them not a little different from those before inserted.

Sensible, however, that there is often, in fact, a great variety; in cases,

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cases, which, on a cursory view, might be thought very similar to one another, he has still to remark, that ample scope will be left, for exercising the judgment, with regard to the necessary variations, in applying the remedies proposed.

Walbrook,
July 5, 1787.

R E M A R K S, &c.

I N T R O D U C T I O N.

AMONG the various disorders to which the human body is liable, inflammation seems to be one of the most considerable; as is apparent from observing the immediate and direct influence which it has, in preventing or obstructing the necessary action of the parts affected by it: and in no case is this more evident, than in the Ophthalmy, or Inflammation of the eyes; which, in every degree of it, is found, in some measure, to impair the sight; and, in not a few instances, has risen to such a height, as entirely to destroy it.

My design, in the following pages, is—first, to lay before the reader some observations on this complaint—then to treat

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of

of a disorder, which more directly affects the eye-lids, and which I have distinguished by the name of the Pforophthalmey—and afterwards to add a few remarks on the Purulent eye, to which new-born children are peculiarly subject.

To enable us to judge more clearly of these disorders, it is necessary to understand something of the structure of the eye and its appendages: a brief account of which is therefore prefixed, referring the reader, for a fuller and more particular description, to those anatomical authors, who have professedly treated on this subject.

*A brief Description of the Eye, and
its Appendages.*

THE globe of the eye is composed of three transparent humours, which, from their supposed resemblances, bear the several denominations of the aqueous, the chryſtalline and the vitreous.

These humours are contained in three proper coats, or tunics, called the Sclerotica, the Choroides, and the Retina; besides which, there is another, common to the globe and eyelids, called the Conjunctiva.

Of the proper coats, the Tunica Sclerotica is the outermost. This, in the posterior and far greater part of its circumference, is white and opaque; but, in the anterior, is transparent, and takes the name of Cornea.

The Tunica Choroides is situated on the inside of the Sclerotica, between it

and the Retina. It is strongly attached to the Sclerotica, round the margin, where the Cornea begins; whence it passes on, and becomes visible through the transparency of that coat. This part of the Choroides is called Iris, being of various colours in different persons; and in its centre is a round perforation, called the Pupil, for the purpose of admitting the rays of light.

The Sclerotica and Choroides are well supplied with blood vessels, particularly the last; the ramifications of which, when well injected, appear to be wonderfully interwoven with one another.

The Retina, or internal coat, appears to be an expansion of the medullary part of the Optic nerve, being a white, thin membrane, of a very soft and tender texture. It lies immediately behind the vitreous humour, round which it is continued to the borders of the chryſtalline, and is generally believed to be the immediate seat of the sense of vision.

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The globe of the eye rests in the orbit, upon a large body of adipose membrane; and is moved in different directions, by four streight, and two oblique muscles. Five of these take their origin from the bottom of the orbit; the inferior oblique alone arising from its edge: and they are all continued forward, till they are inserted, by a tendinous expansion, from its white colour, called *Tunica Albuginea*, into the anterior part of the *Tunica Sclerotica*.

The *Tunica Conjunctiva* is a thin transparent membrane, which lines the inner surface of the eyelids, and, at the edge of the orbit, has a fold, and is continued forward over the anterior half of the globe of the eye. It is exterior to all the other coats of the eye, and connected with the *Tunica Albuginea*, by means of a cellular substance; from which it may easily be separated, in the dead subject, by dissection. Though, in a sound state, it contains only the ferous part of the blood, it is, notwithstanding, extremely vascular; as is

proved by injections, and also by the inflammations to which it is liable. According to Winflow, it is perforated by innumerable and almost imperceptible pores.

The vascular state of this coat appears to be much greater, in that part which lines the inside of the eyelids, than in that which covers the eye; and its continuance, from the eyelids to the eyes, is of great use, to prevent the ill consequences, which might otherwise ensue, from the insinuation of extraneous bodies between them.

The tears are secreted by a conglomerate gland, called *Glandula Lachrymalis*, which is situated in a small depression of the orbital process of the *Os Frontis*, near the outer angle of the orbit; from which they are poured out by small ducts, and continually spread over the surface of the eye, to keep it clear and transparent. They pass from the eye, through two minute orifices, at the inner angle, called the *Puncta Lachrymalia*, which open into a
small

small bag, called *Sacculus Lachrymalis*; and this bag is continued thence, through a bony channel, and opens immediately into the nose.

The little red body, observable at the great or inner angle of the eye, is called *Caruncula Lachrymalis*. It was thought to be the secretory organ of the tears, until a more accurate dissection discovered the true gland at the opposite angle. Some have since supposed, that it secretes an oily humour, like that issuing from the small glands on the inside of the eyelids: but, in fact, we seem to have acquired no certain knowledge either as to its structure or use. It may be said to direct the tears into the *Puncta Lachrymalia*; and, in that office, is much assisted by a reduplication of the *Tunica Conjunctiva*, which has been called *Valvula Semilunaris*. This valve is to be seen plainest, when the eye is turned toward the nose. It is situated close to the Caruncle; and is shaped like a crescent, with its points inclined to the *Puncta Lachrymalia*.

The situation and figure of the eyelids are too obvious, to need description. They hang like veils or curtains before the eyes ; and are furnished with muscles, capable of very quick motion, to defend the eyes from those injuries, to which their situation might expose them. The structure of the eyelids is of the Reticular kind ; and they are very easily distended by accident or disease.

The edge of each of the lids is principally formed by the extremity of the thin cartilage, called Tarsus. These edges take the denomination of Ciliary, and are so adapted to each other, as that, when the two lids are extended over the eye, they meet.

It deserves notice, that the ciliary edges are not sharp, like the edge of a knife ; but rather flat, like the back of it ; having properly two terminations, one external, and the other internal : the former of these it is, that meet when the lids are extended ; while the latter, or internal, still preserve a small distance from each other ;

other ; leaving a gutter or groove, through which the tears are supposed to pass from the Lachrymal gland to the Puncta Lachrymalia, while we are asleep.

It should also be remembered, that the Cilia, or eye-lashes, arise out of the external termination of these Cartilages ; and on the internal, at an evident distance from them, is a line of small orifices, which are the excretory ducts of small glands, that lie on the inner surface of the Tarsus, and are called Glandulæ Ciliares, vel Meibomii. The use of these glands is to secrete a sebaceous matter, similar to soft wax ; which constantly covers the edges of the lids, and keeps them supple.

The above short account of the eye, and its appendages, seems to contain all that is necessary to a right understanding of the following remarks.

Of

Of the Ophthalmy.

THE term Ophthalmy is generally used to express—an inflammation of that part of the Tunica Conjunctiva, which covers the globe of the eye.

It has before been observed, that the Tunica Conjunctiva is a transparent membrane, and receives its white colour, in a state of health, from the Tunica Albuginea, which lies immediately behind it. But, notwithstanding this transparency, it is proved to be vascular by the inflammations which sometimes attend it; during the continuance of which, those vessels, which naturally admit only the finer lymphatic parts of the blood, are enlarged, and become visible, by the intrusion of the red particles.

The Ophthalmy is found in very different degrees. It sometimes occupies only a part of the globe of the eye; but, in common, it extends itself over the whole.

It

It may be superficial, affecting the Conjunctiva only; or so deep, as to reach the Sclerotica and internal coats. In general, the Conjunctiva does not appear to be much thickened: but sometimes its membranous appearance is intirely destroyed, and its projection causes the Cornea to appear depressed and sunk in the globe. When the Ophthalmia is in this state, it is, for the most part, accompanied with violent pain; and is described, in many books, under the name of Chemosis.

The pain, however, is not always in proportion to the appearance of the Ophthalmia. In many cases, where the inflammation seems to be of the slightest kind, the agony is almost insupportable; especially when the eye is exposed to the light: and in some others, where the inflammation appears to be most violent, the uneasiness is so trifling as scarce to be mentioned, though the eye be constantly open and uncovered.

Whatever the degree of inflammation may be, it will, in general, be found that
light

light is offensive to the eye ; and in order to avoid the pain which it occasions, persons, who labour under this complaint, are frequently observed to keep their eyelids shut.

For greater security in this respect, as well as to prevent the motion of the eye, some have practised the injurious method of binding compresses, or plaisters, tight over the eyes, which, by confining the tears, add to the irritation ; and, by their pressure, increase the obstruction in the minute vessels, on which they act. Instead of this, I would recommend the use of a pasteboard hood, or bonnet, to be worn at a greater or less distance from the eyes, as the particular case may require : and, if this is insufficient to prevent their being hurt by the light, the patient must submit to the confinement of a room, where little or none enters.

But it must not be supposed that the access of light is the only cause of pain. Instances are common, in which, though the light is excluded, the sufferings of the patient

patient are continual and excessive, from acute pains, which dart through the eye to the back part of the head. This may be the effect of a less, as well as greater, degree of inflammation; and such sensations always indicate much danger of the loss of sight.

In some cases, the patients constantly imagine that they see black specks, or points, move before the pupil; which symptom is often observed to come on, after the more violent ones are abated. Like the former, it is a frequent forerunner of the Gutta Serena; and is generally accompanied with such a fixed state of the Iris, as renders it incapable of contracting or dilating.

During the continuance of the inflammation, small ulcers are often formed upon the Cornea; which, being first caused by it, serve afterwards to increase it, and render the cure more difficult. These ulcers generally heal in a depression, which is a great impediment to the sight; caus-

ing objects to appear as if they were seen through crinkled glafs.

Small abſceſſes are alſo ſometimes formed between the lamina of the Cornea; which, inſtead of diſcharging their contents, harden into white opaque ſpecks, and, according to their ſize, either partially or totally, prevent the entrance of the light. If the ſpecks are ſuperficial, they may wear off in a courſe of time; but if they penetrate through the whole thickneſs of the Cornea, they do not ſeem to admit of any remedy.

Theſe abſceſſes ſometimes burſt on the inſide of the Cornea, and diſcharge the matter they contain, into the anterior chamber of the aqueous humour, to the bottom of which it deſcends, by its own weight; and here it makes an appearance, like the white ſpeck at the root of the nails, on which account it has been called *Onyx*. The matter, thus produced, is uſually ſmall in quantity; the ſolid texture of the Cornea naturally indiſpoſing it for a large ſuppuration.

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Nevertheless it not unfrequently happens, when there is a long continuance of a violent Ophthalmy, that the quantity of matter, formed in the anterior chamber, becomes much more considerable, without any perceptible disorder in the above-mentioned coat of the eye; and, in this larger collected state, it takes the name of Hypopion. It is difficult to ascertain, as well the source from which this matter proceeds, as the manner in which it is formed; and it is, at present, needless to enquire into either of them, since they can determine nothing with regard to the mode of treatment.

Matter sometimes collects also in the posterior chamber of the aqueous humour. It may here either remain in a fluid state, or be inspissated into a solid substance. If it continues fluid, a part of it usually passes through the pupil into the anterior chamber, and falls to the lower margin of the Cornea. When it becomes inspissated, it most commonly forms adhesions, either to the capsule of the chrySTALLINE humour,
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or to the posterior surface of the Iris, or to both; and in consequence of these adhesions, the pupil becomes contracted, and its figure is rendered more or less irregular, according to the extent of the adhesion. Sometimes the inspissated matter continues loose, and varies its position in the aqueous humour. In this case, if it is small in quantity, it changes its place, according to the direction in which the head is held; and therefore sometimes passes through the pupil into the anterior chamber. Sometimes, again, the inspissated matter remains fixed in the posterior chamber, and there takes the shape of a membrane; dividing this chamber into two distinct cavities, and answering precisely to the idea entertained by the ancients of the cataract. This membrane often adheres by its circular edge only; the middle part continuing loose and moveable. In such a case, as the adhesion is only partial, the pupil still keeps its figure; and the Iris, also, preserves its capacity for motion, though not to the same extent as when there is no adhesion. When the
pupil

pupil contracts, the adventitious membrane has, in some instances, been observed to protrude through it, but to return to its former and common situation, when the pupil is dilated.

The causes that produce the Ophthalmia are various.

It frequently comes on in the the most sudden and unexpected manner, without any preceding or concomitant illness. When it happens in this way, the common people call it a blast in the eyes: and, indeed, it seems to proceed from some peculiar property in the air, which surrounds us. Like other epidemical diseases, it often affects a whole neighbourhood, at the same time: as was the case during the summer 1778, at Newbury in Berkshire, and in several of the camps; where it was known by the name of the Ocular Disease.

Blows on the eye, according to the force with which they are given, may bring on very different degrees of inflammation. If slight, the effects are, most commonly, of short duration; but if vio-

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lent a confusion in the coats and humours often takes place, and, in consequence of it, a blindness which appears to be incurable.

Wounds and punctures are attended with consequences equally pernicious. Swords, knives, and such like instruments, generally enter between the globe and orbit, pierce the Conjunctiva, wound the cellular membrane that sustains the eye, and, if continued onward, penetrate into the brain itself. Wounds thus occasioned produce the most dreadful head-achs, inflammations, abscesses, and sometimes immediate death: but if the mischief is done with needles, pins, or sharp-pointed instruments like them, they are more apt to pierce the globe itself. Hence it often happens, that such punctures are followed with the immediate and total loss of sight.

It is not unusual for blows on the eye, as well as punctures and small wounds, to produce an extravasation of blood under the Tunica Conjunctiva. The quantity of blood thus extravasated is sometimes so

confi-

considerable, as to elevate the Conjunctiva above the level of the Cornea, in the same manner as in the Chemosis; and, at other times, the quantity is so small, as to be no otherwise visible, than by a little redness, round the vessel from which it issued. It is here to be noticed, that the appearance of the extravasated blood, though at first red, after a few days, turns dark and livid.

Similar extravasations may also take place without any external accident. Persons of a plethoric habit seem more subject to them than others, and they are most likely to happen, when the weather is hot. These effects, in the instances last-mentioned, are probably owing to a debility in the vessels of the Conjunctiva, which renders them unable to resist the impetus of the rarified blood. But whatever be the cause, whether internal or external, if the eye has sustained no other injury, the extravasation never occasions pain, or, in any great degree, affects the sight.

When the Cornea is wounded, it sometimes happens, that a portion of the Iris

is forced through the wound, and thus forms one species of the Staphiloma. The inflammation, which was at first occasioned by the injury done to the Iris, is continued and heightened, by the irregular pressure of the projecting part against the inside of the eyelids. This inflammation often affects the internal parts of the eye, as well as the external; and the capsule of the chrystalline, in particular, is very liable to be rendered opaque by it.

It might be apprehended, that, in consequence of the above-mentioned accident, the pupil would certainly contract: and so it usually does, but not always; for cases do sometimes occur, in which, either through the smallness of the pressure made upon the Iris, or the superior power of resistance in that membrane, the pupil does not suffer any contraction at all.

From the same cause, I mean the projection of the Iris, and the pressure made upon it, it also not unfrequently happens, that the pupil is drawn from the center to the outer margin of the Iris, and is changed
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from a circular to an oval and irregular shape. And yet, notwithstanding this change of situation and form, it is sometimes found to preserve its size, together with its power of contracting and dilating; and the sight continues as perfect in all respects, as if no such accident had happened.

If, in consequence of a wound through the Sclerotica and Choroides, a portion of the Retina is forced through and entangled, the pupil, instead of contracting, becomes dilated, as it is in a confirmed Gutta Serena; and the sight is immediately and totally destroyed.

Foreign bodies entangled in the eye are another common cause of inflammation. These, during their continuance, occasion great pain, and an inability to move the lids. They also excite an additional secretion of tears; the flow of which is, in general, sufficient to remove them: but if that fails, the lids must be held open by the fingers, and the patient desired to look towards the side, which is opposite to that

wherein the extraneous substance lies; when, if small, it may be wiped off with wet lint on the point of a probe. If there is reason to suppose that more particles than one are in the eye, it may be necessary to send a stream of warm water over it, by means of a syringe; or to fix an eye-cup on the lids, filled with water, or some other mild liquor. The cup, being shaped exactly to the part, will permit the lids to be opened or shut at pleasure, whilst the eye is immersed in the fluid which the cup contains.

If there be an adhesion of the extraneous body to the Cornea, and that so strong as to resist these attempts to remove it, authors recommend that it be separated with the point of a lancet; which, no doubt, if due care be taken, may be done with perfect safety; but, previous to this, it cannot but be adviseable to make use of a thin blunt-pointed scoop, something larger than a common probe; which has this advantage over the lancet, that it will not wound the Cornea, and consequently will
leave

leave no scar, that might be afterwards an impediment to the sight.

Sometimes, small extraneous particles, insinuated under the upper lid, adhere to it so closely, that none of the means above-mentioned are able to remove them. In these cases, it is necessary to turn the inside of the lid outward; and this may, without difficulty, be effected with the fore-finger and thumb of one hand, applied to the lower edge of the lid, under which the complaint lies; a small pressure being at the same time made by a probe, or any similar instrument, in the other hand, on the outside of the lid, a little above the upper margin, for the purpose of keeping that part down, till the lid is first gently raised, and then turned. In this position of the lid, the foreign particle is immediately brought into sight; and, as was before directed, is to be removed either by wet lint on the point of a probe, or, in case of necessity, by the point of a lancet.

I have met with a few instances, in which, small pieces of Iron, having acci-

dentally fallen into the eye, continued there for several days; after which, a suppuration has taken place round them, which was separated their attachment, and they have dropped out of their own accord. But, in general, it must be very unsafe to trust to the operation of nature in such cases; for the continuance of these, or of any substances, in the eye, even for a short time, is likely to bring on inflammations of the most violent and injurious nature.

The small-pox and measles are two other frequent causes of the Ophthalmy. In the former, the face oftens swells, the eyes redden, and the eyelids are closed for a considerable time, by the glutinous matter which lodges on their edges. At the same time, a thick humour collects between the lids and the globe, which irritates, inflames, and sometimes ulcerates the Cornea. In the measles, the eyes are always affected; and the tears, which flow in an increased quantity, feel remarkably hot, and painful to the patient:

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but, in both these disorders, the more frequent and lasting mischief is done to the eyelids, as will be particularly remarked in the next section.

The inflammation of the eyes may also be justly esteemed one among the variety of bad effects which result from a scrophulous habit; being frequently found in company with enlargements of the sub-maxillary glands, thickness of the lips, and other certain symptoms of that disorder: but these kinds of Ophthalmy, like those last mentioned, are, in general, preceded by, and attended with, a disease of the eyelids, which is properly glandular, and will be the subject of a separate chapter.

The venereal disease is produced by so active a poison, that when it has once entered the habit, no part can be said to be exempt from its malignant influence. Monsieur St. Yves observes, that the Ophthalmy very rarely proceeds from a venereal taint; but says, that he has met with several cases, in which it was plainly owing to this cause: he then adds the following
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remarkable account; “ That, in most of
 “ the cases, the disease in the eyes ap-
 “ peared two days after the beginning of
 “ a virulent Gonorrhœa. The matter,
 “ being suppressed from the Penis, seemed
 “ to pass through the eyes, staining the linen
 “ in a similar manner.” This account is
 the more surprizing, because such an effect,
 as is here described, has never been ob-
 served by other writers on this subject, or
 any one of the faculty with whom I am
 acquainted; though some of them have
 had a long and extensive practice both in
 the Ophthalmy and Gonorrhœa. When-
 ever a metastasis takes place in the Go-
 norrhœa, which is not uncommon, the
 change is made to one or other of the
 following parts:—to the testis, producing
 a hernia humoralis;—to the neck of the
 bladder, where it is attended with what
 has been called the Algado;—between the
 præputium and glans penis, causing a
 spurious kind of Gonorrhœa;—to the
 groins, exciting buboes;—or else, being
 absorbed into the blood, it is diffused
 through the whole habit, and, in a longer
 or

or shorter space, discovers itself by the true and certain signs of a general Lues. A metastasis, in any of the instances here pointed out, may happen, in consequence of a premature cessation of the primary discharge; but so compleat and quick a transition of the venereal poison, from its first seat to another so distant as the eye, is, I believe, very uncommon, if ever the case. Nevertheless, it is a fact not to be controverted, that such a complaint, as St. Yves describes, does sometimes accompany the Gonorrhœa: but, instead of commencing two days after the formation of the Gonorrhœa, as is particularly stated by St. Yves, I have commonly observed it not to arise, till some time after mercurials had been applied, for the cure of the latter disorder. Nor is this purulent kind of Ophthalmy peculiar to those subjects, in which a Gonorrhœa has been previously contracted: for, in many instances, the former has been found to take place, where the person, affected by it, has been entirely free from any venereal taint: and, even in subjects thus infected, it has also very frequently

quently been observed, that the Ophthalmia above described, during the use of mercurial medicines, has been increased to such a degree, as to generate matter behind the Cornea, in a quantity sufficient to rupture that coat; and hereby, in its consequences, greatly to endanger, if not utterly destroy the sight. Now, from such instances, of which numberless have occurred, are we not naturally led to impute more to the extreme irritability of the eye, than to any other cause; and this especially, when, as is well known, this effect is commonly found to follow on the use of mercurial medicines in many habits; and which are of course hereby rendered peculiarly liable to inflammations, from the slightest other concurring causes? By these remarks I do not mean to deny the possibility of an Ophthalmia, proceeding solely, or chiefly, from a venereal complaint: but, of this we may be sure, that when it has this origin, the habit must be universally, and to a violent degree, infected with the same disorder; and even in such cases, the inflammation may be greatly

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ly increased by the mercurial applications, necessary to correct the taint, received from the original or venereal cause.

It has been said, that if any of the matter, which passes from the Urethra, in a Gonorrhœa, be applied to the eye, it will bring on an Ophthalmy, accompanied with a discharge, similar to that, which previously took place from the Urethra. Probable as this may appear in speculation, I have found it very difficult to ascertain the fact. It is certain, however, that variculous and scrophulous matter, applied in the same manner, have produced the similar effect of inflammation: and it therefore becomes necessary, in all such cases, to prevent the possibility of communicating infection, that the handkerchief or cloth, applied to the patient's eyes, should be confined to his use alone: and such caution should be especially preserved, in families where there are children; as they are more likely to receive injury in this way, than grown persons.

There is yet one other cause of the Ophthalmy, which, though a less common
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one than those already pointed out, it will be proper just to mention ; and that is, an inversion of the edges of the eyelids, called by authors, Trichiasis. This, by causing the hairs, growing out of the ciliary edges, incessantly to rub against the eye, greatly irritates it, so as to bring on inflammation ; which, if the cause be not soon removed, will increase and become violent.

In a few instances, also, a preternatural row of hairs has grown ; which, without any inversion of the lid, as in the case last mentioned, have, by their friction against the eye, greatly inflamed it.

Having said all, that appears to be necessary, on the nature and causes of the Ophthalmia ; I now proceed to treat of the proper methods of cure.

Bleeding is generally recommended, and cannot but be highly proper, in most ophthalmic cases : but from what part, and in what manner, the blood should be taken, are, I apprehend, points which deserve a more particular attention, than has been usually paid to them.

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When the Ophthalmy is attended with any considerable degree of fever, as it sometimes is, or, where the habit is plethoric, as is the case in some subjects, it will then be necessary, before any thing else is done, to take eight or ten ounces of blood from the arm. If, after this, the inflammatory symptoms still continue, the bleeding must then be repeated; and this, as often, and in as large a quantity, as shall be found necessary; which can alone be determined by the particular circumstances of each case. In some instances, it has been necessary to bleed even eight or ten times, in as many days. But, as in the greater number of cases, the fever is merely symptomatic, the object more immediately to be attended to, in common, is the removal of the irritation on the eye; for when that ceases, the fever produced by it will of course subside.

To effect this, whether the case points out the necessity of a previous bleeding in the arm, or not, it will be highly expedient to bleed, by one mode or other, on
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or near to the diseased part. Opening the temporal artery is, on all hands, allowed to be a mode of bleeding the most effectual, as well as speedy, for the purpose. The near situation of this artery to the seat of the disease cannot but render it peculiarly desirable, that blood should be taken from it: but, here, the two following difficulties, lying in the way, prevent its being generally used. The first is, it often happens, that this artery will not yield a quantity of blood, sufficient to answer the end: and the second, that troublesome, and even dangerous, hæmorrhages have been sometimes found to issue from the orifice, at the distance of many hours after the operation. On these accounts, the application of leeches to the temples has been generally preferred. Three are commonly found sufficient, and the use of them has been attended with every success, which could be expected, or desired, from it. At the same time, it must not be passed over, that in some obstinate cases, when this mode of bleeding has failed, and
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though aided by various other means, hereafter to be described ; it has been judged necessary to make a compleat transverse division of the temporal artery ; which has been preferred to barely opening it, as the division would not only cause a derivation of the blood from the part affected, but must also cut off a principal source, by which the inflammation was constantly fed : and, in this mode of proceeding, I have known great relief to be almost instantaneously given to the patient, on whom all other applications have proved ineffectual ; and without any bad consequence whatsoever.

The external jugular vein has also been, sometimes opened, in this complaint. But that has not been commonly done ; because, though this vein does indeed receive blood from all the vessels distributed to the external parts of the head ; yet, not coming immediately from the eye, the opening it does not yield so direct a derivation as the former mode of bleeding, or as that which follows.

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I have before recommended the application of leeches to the temples, as very proper and sufficient in most common cases ; and so it certainly is. It is, however, to be observed, and should be remembered, that they are not to be placed on, or very near, the eyelids : for, when thus applied, they have sometimes been found to occasion a considerable swelling of the lids, and have also, for a time, increased, instead of lessened, the irritation on the eye. In order to prevent these mischiefs, it will be proper to apply the leeches in the hollow of the temple, about the distance of an inch and a half from the outer angle of the orbit, and to put them as near together as possible.

But of all kinds of bleeding, that which would be most effectual, if it could be performed without adding to the irritation, is the still more topical mode of bleeding the eye itself. This has been attempted different ways. Some have scraped the Conjunctiva with a brush made of barley beards ; while others have opened the inflamed

flamed vessels with the point of a lancet ;
 or, if one or two only were distended,
 have made use of a crooked but sharp-
 edged needle, which they have introduced
 underneath the vessels, dividing them by
 its edge, as it cut its way out. As to the
 first of these methods, that of bleeding
 the eye with barley beards, though I have
 used it several times, I never found any
 great or lasting benefit to be produced by
 it. In a few instances, the pain it occa-
 sioned was very severe, and the inflamma-
 tion, instead of being lessened, was after-
 wards increased ; which I could no other-
 wise account for, than by supposing that
 some of the fine invisible spiculæ of the
 beards were left in the eye. As no care
 can prevent this accident, it appears to be
 an insuperable objection to the practice.
 The two modes last-mentioned may be
 tried in cases where the blood vessels, con-
 nected with a speck on the Cornea, are not
 to be cleared by any of the common me-
 thods which are used for the purpose.
 Yet, in both these modes of practice, there

must always be no small uncertainty ; as the simple division of the vessels has, in very many instances, not been effectual, so far to destroy their continuity as to answer the end. This has not uncommonly occurred in my use of them ; on which account it has been necessary to take away a small portion of the vessels, as well as divide them. This I have effected with success by the following operation, and would therefore recommend it to others, where the two former are found to fail. The upper and lower lid being kept separate by the hands of an assistant, the vessel or vessels to be operated on must be first raised by a hook or forceps in one hand of the operator, while, with a small pair of curved sharp-pointed scissors in the other, he is to cut off the raised and included portion parallel to the circumference of the Cornea. If the vessels lie near enough to one another, two or three may be operated on at the same time ; but as all such vessels must be divided, if it cannot be done at once, the operation must be repeated

peated as often as necessary, which will depend on the number of these vessels, and their relative situation to one another.

There is one other particular mode of taking blood from the eye, which, in acute inflammations, has sometimes been very useful. In the description of the eye, prefixed to these remarks, it has been observed, that the blood vessels, visible in that part of the Conjunctiva which covers the inside of the eyelids, are much more numerous, than those observable in that part of it which covers the globe of the eye. In consequence of this, it always happens in the Ophthalmia, that the inflammation is greatest on the inside of the lids; the blood vessels, in that part, being often not only much increased in number, but also extremely full and turgid: and sometimes the whole of the inside of the lids, particularly the lower one, is so much enlarged, as to be constantly everted. In both these cases, great benefit has been derived from scarifying them with a lancet, by means of which a considerable

quantity of blood has been removed. When, again, the swelling of the everted lids has been very considerable, great and speedy relief has been given, by cutting off a portion from each of them with a pair of curved scissars; the loss of blood, consequent on this, diminishing the general swelling, while the reduction made in the size of the lids, by the same operation, has caused them almost instantly to return to their natural position.

Bleeding, by some of the modes now mentioned, and in a greater or less quantity, seems to be necessary in most cases of the Ophthalmia, and makes no small part of the cure. This, however, great as its utility is, will not suffice of itself; but must be aided by other means, which I shall now specify.

The use of blisters is admitted by almost every writer on the subject; but there have ever been different opinions concerning the part, to which they should be applied. Hoffman thinks the feet the most proper: and relates, that a blister, applied
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on the nape of the neck, had been found by him to increase the pain in the eyes; whilst one applied to the feet gave relief, as soon as the discharge took place. Pouteau, on the contrary, would, in all cases, have them placed as near the diseased part as possible. In short, medical authors have differed in nothing more, than in their ideas on the utility of what is called Derivation and Revulsion. Both these terms suppose a discharge, and differ only in the part from which the discharge is procured; which, in the former, is as near as possible to the seat of the disorder; and, in the latter, at the greatest possible distance from it. Now, from what we know of the laws of circulation, in common subjects, it should seem, that a discharge from any one part of the body would take off equally, or in proportion, from every part; and consequently, would produce that diminution of the whole quantity, from which alone any benefit could be expected. Yet this reasoning will by no means apply in all

cases, where some one part of the body is singly affected: for, numberless instances might be adduced, from the best practical authors, of the efficacy both of Derivation and Revulsion, in various external, as well as internal, complaints. So far, however, as my own experience has gone, in cases of this kind, the benefits produced by Derivation have been much greater than those by Revulsion: and it is, accordingly, a fact fully verified by practice, that the greater the Derivation is, and the nearer to the inflamed eye, the more considerable are the benefits produced by it; whether the discharge be of the serous, or of the sanguineous kind. For these reasons, when the leeches have fallen off, and the consequent hemorrhage has ceased, I would advise a blister, of the size of half a crown, to be applied on the temples, directly over the orifices made by the leeches; and I have found, that the sooner the blister has followed the bleeding, the more efficacious both have proved.

When

When the Ophthalmia has been very severe, and all the common methods of relief have failed, the most beneficial effects have also sometimes been produced by the application of a blister, large enough to cover the whole head. Nor is this by any means inconsistent with the opinion above advanced respecting Derivation and Revulsion; the increased discharge from a blister of this size on the head, being more than sufficient to counterbalance any little disadvantage which may attend it, in point of distance from the part affected.

Through the whole progress of the disorder, every thing that can heat or irritate should be carefully avoided; the cooling and antiphlogistic regimen should be used, with gentle laxatives to keep the body open. At the same time, the patient is to be guarded with no less care against strong purges, which have often been employed, in this and many other complaints, without answering any other end, than that of lowering and weakening the habit. Hippocrates, it is true, has

has said, that a diarrhœa, or flux of the lower belly, was a cure for the Ophthalmy: but, by this, he must be supposed to mean, either a diarrhœa, which takes place without the interference of physic at all; or one, according to the explication of Riverius, that is produced by the mildest medicines, and such as restrain the fever of the blood.

Besides bleeding and blistering, some local applications are necessary. I would particularly recommend the Thebaic Tincture of the London Dispensatory; a medicine composed of Opium and warm aromatics, dissolved in mountain wine. The power of Opium, when inwardly taken, to ease pain and induce sleep, has been long known: but its external use is absolutely forbidden by some very respectable persons of the medical profession. Galen relates, that a gladiator was killed by a plaister of Opium applied to the head; and other authors have said, that blindness and deafness were caused by its application to the eyes and ears. Experience, however, makes directly against these

these assertions; and proves, beyond contradiction, the great efficacy of its outward use in a variety of cases. In the Ophthalmy, particularly, I have found the Thebaic Tincture, wherein Opium is the principal ingredient, to be eminently serviceable: and the mode, in which I have applied it, has been, to drop one drop of it into the eye, once or twice a day, according as the symptoms were more or less violent. When first applied, it causes a sharp pain, accompanied with a copious flow of tears, which continues a few minutes, and gradually abates; after which, a great and remarkable degree of ease generally succeeds.

The inflammation is often visibly abated by only one application of this tincture; and many bad cases have been completely cured by it in less than a fortnight, after every other kind of remedy had been used for weeks, and sometimes months, without any success. But this speedy good effect is not to be expected in all cases indiscriminately. In some, the
amend-

amendment is more flow and gradual, requiring the tincture to be made use of for a much longer time; and a few instances have occurred, in which no relief at all was obtained from its first application. In cases of the latter kind, in which the complaint is generally recent, the eyes appear shining and glossy, and feel exquisite pain from the rays of light. However, notwithstanding these symptoms, the application is sometimes found to succeed; and whether it will or not, can only be determined by making the trial; which is attended with no other inconvenience than the momentary pain it gives. When it is found to produce no good effect, the use of it must be suspended, until evacuations, and other proper means, have diminished the excessive irritation; after which, it may again be applied, and bids equally fair for success, as in those instances in which it never disagreed.

Though I have said, that Opium is the basis of the Thebaic Tincture, it is yet
 necessary

necessary to observe, that the manner in which it is here prepared, is that on which its efficacy not a little depends. I have several times applied a strong solution of Opium in water without any success. The pain, indeed, was sometimes lessened for a while, but the inflammation always remained in its full force, as if nothing had been done. A fomentation made with poppy-heads, and applied warm, has been found comfortable to the diseased part; and, in slight attacks of this disorder, has been sufficient to remove it: but, in more obstinate cases, it has repeatedly been found ineffectual, until the tincture itself was used.

That I might judge still more certainly, what it was in the Thebaic Tincture, which chiefly caused its utility; I have also once or twice made the experiment of the sole application of the other principal ingredient, which is mountain wine. But this I found, while it produced a still stronger irritation in the eye, and of much longer

longer continuance, than the tincture, was followed with no kind of benefit.

Having thus satisfied myself, that neither of the ingredients, in their separate state, was able to give the relief which they uniformly did when combined in the tincture, I have for a long time past confined myself to the use of the latter, and am warranted, from repeated experience, to recommend it, with the helps and cautions above given, as a most effectual application in every species and stage of the disorder, from the most mild and recent, to the most obstinate and inveterate.

But, as there are some variations in the directions of different dispensatories, for making this tincture, it is necessary to be noticed, that the preparation I have used, and which is in common use here, is that of the London Dispensatory. Nor is any further caution wanting, as to the application of it, but that should it be found too hot * for the eye, and which there will

* The undue heat of the tincture is to be accounted for by the spirit, which, though no part of the original pre-

will be always reason to apprehend, when the patient, instead of being relieved, suffers more violent continued pain after, than he did before, the use of it, it must then be corrected by the infusion of an additional quantity of Opium: and with this alteration, it has been known to succeed in most of the instances, in which it had at first failed, and to have become no less effectual in these, than in other cases.

It may be expected, that I should say something of the manner in which the Thebaic Tincture operates, when applied for the cure of the Ophthalmy. I have found it very difficult to satisfy myself in this particular, but shall submit the following thoughts to the judgment of the faculty.

Its first obvious effect is the same with that of every other stimulus; which is,

prescription, is commonly added to it, for the purpose of preserving it. Care should, therefore, be taken, both that the quality of the spirit be good, and that the quantity be not more than is sufficient to answer the end proposed by it.

to cause pain and heat in the eye: at which time, if the eye be carefully inspected, the number as well as magnitude of the blood-vessels will appear to be increased. At the same time, a flux of tears will be excited from the lachrymal gland, and, it may be, an additional secretion of fluids from those exhaling pores, of which the Tunica Conjunctiva is full. The effects above described are most probably produced by the vinous and aromatic parts of the composition; and by their action I suppose the circulation of the fluids to be accelerated, and some minute obstructions to be removed. The discharge, it occasions, may also be considered as a derivation, made immediately from the diseased part, by which it is somewhat emptied and disburdened. The severity of the stimulus does not continue long, and as soon as it is gone off, the eye becomes perfectly easy, and the blood-vessels will be found, not only to be less than they were on the first operation of the medicine, but much less than before

before it was applied at all: and the consequent ease and tranquillity of the eye may, in part, arise from the discharge which the medicine has occasioned, but more, from the known specific power of the opium, to take off irritability and relieve pain.

Though these salutary effects are in general experienced, and in a very remarkable degree, from the application of the Thebaic Tincture, in cases of the Ophthalmy; nevertheless, instances will sometimes occur, in which, without any considerable appearance of inflammation, the pain both in the head and eye continue violent, even after the general fever is removed, and so as to resist the united power of this most efficacious anodyne, though taken inwardly, as well as applied outwardly; and used in both ways with regularity and freedom. In such cases, the internal parts of the eye seem to be principally affected: and in some of the more obstinate ones, where a great variety of other remedies had been tried in vain, I

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have

have occasionally had recourse to the corrosive sublimate ; which, taken inwardly in small doses, has been attended with considerable and speedy success.

A solution of sublimate in distilled water, in the proportion of one grain to four ounces, has been recommended by some authors, as a good outward application in all ophthalmic cases, but particularly those of a venereal kind. This, the same authors have observed, will be found generally useful in removing films and excrescences from the Cornea. I have made trial of it for the purpose last-mentioned, and have found it to be very effectual. In cases where the film has not penetrated below the surface, it has been soon removed, though in others, where the complaint has gone deeper in the Cornea, the cure has required a longer time. In cases of the latter kind, it will not only be proper to use the sublimate water, but to touch the opaque part once in a day with the Unguentum Citrinum of the Edinburgh Dispensatory, which is to be applied

plied warm, on the point of a small pencil brush.

It has been said, p. 14. that specks or opacities in the Cornea, under certain circumstances, seem not to admit of any remedy. I would now beg leave to explain myself a little further on that head. Every one knows, that the slighter films, which shew themselves on the Cornea during an Ophthalmia, often disappear, as the Ophthalmia goes off. And this has sometimes been the case, even with regard to those opacities, which, during the Ophthalmia, seemed to cover the pupil entirely, and almost the whole of the Cornea. But, as I said above, all opacities of the Cornea are not capable of receiving this relief. Some specks, arising from different causes, seem to enter so far into its texture, as to alter its very nature. Such, in particular, are those produced by pustules, which form upon the Cornea, during the small-pox; not only occupying the outer surface, but penetrating to its inmost lamina. Nevertheless, it will some-

times so happen, even in these cases, that the opacity does not obtain equally, in every part, as far as the speck goes. Of consequence, where the opacity was least, it has gone off soonest; but the darker parts have also in time, in many instances, received full relief: and, where the speck could not be wholly removed, the size of them has been much lessened. It must be allowed, that nature has been known to work its own cure, without the aid of any foreign assistance whatsoever; but it is as true, that some applications have, from their own specific quality, so direct a tendency to disperse any matter which may be the cause of obstruction, as must render it, in all cases, greatly desirable that nature should be assisted; both for the sake of facilitating and forwarding the cure. And to such assistance, it is to be very much attributed, that, in some instances, specks, which had remained long after the inflammation was gone off, have been removed; but which, probably, had nature been left to itself, would have remained

mained there always. I have before noticed the use of the solution of Corrosive Sublimate, with the Unguentum Citrinum, as good outward applications in the cases last described. Both these preparations unite in producing the effects of a temporary inflammation, accompanied with an increased flow of tears; and these cannot but be very likely means for carrying off any opaque particles lodged in the Cornea, and restoring it to its natural transparency. In much the same way, the Thebaic Tincture has not uncommonly been found useful in similar cases. The Pulvis Vitri and Saccharum Album have also been much used for the purpose, and are in such cases blown upon the specks, or rubbed over them by means of a brush. But these, it must be observed, are much less active than the applications above mentioned, and, indeed, seem to operate in no other way, than by the friction they cause.

The outward application of the Aqua Saturnina was warmly recommended by Mons. Goulard, as a certain cure for all

cases of inflammation, and particularly in the eyes. But the faculty have found, that, though in recent complaints caused by accidents, it has sometimes succeeded ; yet in others of longer standing, and where the causes have been more complicated, it has generally failed : and, for that reason, it is now seldom used.

Under the circumstance of blood's being extravasated under the Tunica Conjunctiva, there cannot be an easier or more effectual remedy than *Æther*. A few drops are to be poured into the palm of the hand, and diffused over it ; which will be immediately done by pressing the other hand against it. The hand is then to be applied to the eye, and kept so close to it, that the spirit, as it evaporates, may insinuate itself into the part affected, and act on the blood, there forced from its channel, so as to disperse it.

When matter is collected in the anterior chamber of the aqueous humour, if the quantity be not considerable, the means above recommended for the Ophthalmomy,

thalmus, vigorously applied, will, in common, be found sufficient for the purpose of absorbing it. But if the quantity be large, or if, where the collection is smaller, it is found, under the use of absorbent means, to increase instead of diminish, it will then be necessary, without delay, to make an incision through the inferior part of the Cornea, in order to discharge it. This incision will be best performed in the manner used for dividing the Cornea, in the operation of extracting the Cataract, as described by Mr. Wathen, in his Dissertation upon that subject: to which I must beg leave to refer, both for the description of the knife*, proper to be used in such operations, and also for the operation itself†, so far as it agrees with that performed in cases of the Cataract. Under the present complaint, it should, however, be particularly attended to, that the point of the knife is to enter the Cornea about

* See Dissertation on the Cataract, by Mr. Wathen, page 103.

† Ibid. page 78.

one-tenth of an inch above the surface of the collected matter; which is highly necessary, to its being carried on, both with ease and certainty. And from a neglect of this circumstance in introducing the knife, it has not uncommonly happened, that the operator has found himself deceived; having carried his knife no further than between the lamina of the Cornea, when he expected to have penetrated through it.

In some cases, matter, after having been discharged by the operation, has again collected in the same part; and, in a few instances, this has been repeated several times: the best expedient for preventing which, is to take care that the first incision of the Cornea be sufficiently large. But should matter form after the first opening, to whatever cause it be owing, it will be absolutely necessary to repeat the operation; and this, as often as there shall be found occasion.

I cannot dismiss the subject above treated of, without entering a caution against delaying the operation, whenever it becomes
 necessary;

necessary ; as such delay, if continued for any considerable time, may issue in the total destruction of the Cornea, and, of consequence, the irrecoverable loss of sight. And, even after the sight is gone, the great injury done to the eye, by the general sup-puration which has been suffered to take place in it, may be the source of continued additional and extreme pain : not to say, that the sight of the other eye, and even the life of the patient itself, may be hereby endangered. In this last and worst stage of the complaint, should it unfortunately have arisen to this height, nothing remains, but wholly to remove the anterior portion of the eye ; by which, way will be made for discharging, at once, the morbid matter, together with the vitiated humours ; and this being done, what remains of the coats will, of course, subside to the bottom of the orbit, and the comparatively happy, but still dire, effect of all will be, the ease of the patient in a state of total blindness.

In

In the enumeration of the common causes of the Ophthalmy, the last-mentioned was an inversion of the edges of the eyelids. For an Ophthalmy thus produced, a palliative cure may be effected, or, to speak more conformably to the fact, a present and temporary relief may be given to the patient, by taking out the lashes with a forceps, a pair of nippers, or any instrument of the like kind. But, while the lids retain this inverted state, no sooner do the hairs grow again, than the disorder will again return; nor can the patient be ever properly said to be cured of the complaint, till the edges of the lids are restored to their natural position, and can be kept in it.

It is however necessary, that a distinction be made between an inversion of the upper and lower lid. For though an inversion of either will produce the same effect, yet, in the different lids, it appears to arise from different causes, and, consequently, to require different methods of cure.

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The upper lid and its ciliary edge, both in motion and at rest, are preserved in their natural situation, by the equal, though contrary, actions of the *Musculus Orbicularis*, and *Levator Palpebræ Superioris*. But the lower lid, whose motion is very small in comparison with that of the former, has no muscle correspondent to the *Levator* of the upper; and is preserved in its natural state by the equal action of the orbicular fibres spread over it, and the counteraction of the skin which covers it: in which last respect it differs materially from the upper lid, the skin of which, on the contrary, being always very thin and flaccid, is incapable of any such counteracting power.

From the above account, it is manifest, that when the *Trichiasis* affects the upper lid, it must be owing to a relaxation of the *Levator Palpebræ Superioris*, and a contraction of the superior part of the *Orbicularis*; whereas, in the case of a *Trichiasis* affecting the lower lid, it can only arise from a relaxation of the skin, and a con-

contraction of the inferior part of the Orbicularis. And, as in these two cases, the causes of the disorder are very different, so they will, of consequence, require a very different treatment. In the Trichiasis of the lower lid, it will be necessary to increase the counteracting power of the skin which covers that lid, so as to prevent the contraction of the Musculus Orbicularis: whereas, in the Trichiasis of the upper lid, it is plain that the sole object of attention must be, to give an additional stimulus to the Levator Palpebræ Superioris, for the purpose of exciting it to proper action.

The Trichiasis of the upper lid happens but seldom. But, in an instance of this kind, which did occur, an entire cure was produced by an operation, hereafter to be described, which was performed by a gentleman of great eminence in his profession, to whom I am indebted for the information. For the operation see Case IX.

The

The Trichiasis of the lower lid is a more common complaint. When it is recent, a cure has sometimes been accomplished, by making a fold in the skin below the inverted lid, to draw its edge from the eye. In some cases, nothing more will be requisite to preserve the fold, than to cover it with a piece of sticking-plaister. But, at other times, when the plaister cannot be made to fasten, it will be necessary to use an instrument for the purpose, which must be so contrived, as to take up a small portion of the skin, and to hang by it on the cheek. Of such an instrument mention is made in Case VIII.

When the disorder is slight, the skin may be restored to its natural state by the methods above described. But in more obstinate cases I have generally been obliged, for the same end, to cut off a small transverse portion of the loose skin below the edge of the lid, and afterwards confine the sides of the wound together, by means of two or three sutures ; which has

has effectually answered the purpose. See Case VIII.

There are cases, however, in which none of these methods will be sufficient for the cure: as, where the ciliary edges are not only inverted, but likewise contracted in length.

Under these circumstances, relief is to be obtained no other way, but by enlarging the circumference of the ciliary edges. This may be done, either by an incision at the outer angle, or by a compleat division of the cartilage, called Tarsus, in the middle. The first of these operations is no more than a simple streight incision, which may be made with a sharp-pointed curved-Bistoury. The last, which is seldom necessary, will also be best performed by the same instrument; only observing, that the point be carefully introduced between the globe and eyelid, and carried below the cartilage, that is, about one-eighth of an inch in the whole; whence it is to be pushed outward in a horizontal direction, till it has cut its way through the lid:
the

the cartilage being thus intirely divided, each portion will recede towards the angles, and a separation be left between them, which will not only take off the complaint for the present, but prevent the possibility of its return in future.

I have only further to add, on the extraordinary instance of an Ophthalmy, produced by a preternatural row of eyelashes, growing out of the inner termination of the edge of the lid; that, as far as hitherto appears, nothing better can be done for it, than the application of the palliative remedy above-mentioned; I mean, the frequent extraction of the hairs by the roots: for, though other attempts have sometimes been made, they have proved so very unsuccessful, as not to deserve further notice.

CASES.

C A S E S.

*External Application of Thebaic Tincture in
Inflammation, with Speck on Cornea.*

C A S E I.

M. C. about 26 years of age, caught a severe cold after a miscarriage, and the cold brought on a violent inflammation of the left eye. She made use of a great variety of eye-waters without any effect. After this, she was blooded with a leech on the temple, at three different times, and at the distance of a few days from each other; by which the inflammation was certainly diminished: but, upon her taking fresh cold, it returned, and soon became as violent as before. In six weeks, a large speck was discernible on the right side of the pupil, and in part covering it; and the inflam-

inflammation was so extreme, that the least degree of light gave her the most exquisite pain. At that time, the Thebaic Tincture was applied according to the directions before given. Its first application produced, as usual, a severe smarting for a few minutes; but this going off, the patient felt a remarkable degree of ease. The inflammation ran so high, when I first saw her, that, besides the use of the tincture, I directed the immediate application of three leeches to the temple of the side affected; which was to be followed by a blister, as soon as the bleeding ceased. It turned out, that the leeches could not be made to hold, and the blister was on that account omitted. The second day, the patient found herself greatly relieved, and the eye appeared to be much less inflamed. The Tincture was therefore applied again, and became so effectual, that there was no occasion afterwards for the use of either the leeches or the blister. In three days she could open her eyes without pain; and in a fortnight, the Ophthalmomy

tholmy was entirely gone off, and the Cornea clear enough to admit such a degree of sight, as was sufficient for all the common purposes of life.

C A S E II.

External Application of Thebaic Tincture, for Pain in the Eye without Inflammation.

A young Lady in the city, from the time of her having the Small-pox, which is now about six years, had been subject to almost continual heating, plunging pains in her left eye, with little or no apparent inflammation.—Before she had the Small-pox, her eye was occasionally inflamed; and during its continuance, a pock settled directly upon the sight; leaving no speck, but causing a depression, that prevented the rays of light from falling equally, and which made objects appear, as if they were seen through wavy glass.—She had taken the advice of many
Gentlemen

Gentlemen of the faculty, who chiefly made use of internal medicines, but without any success. Afterwards, at a time when the pain was greater than ordinary, the Thebaic Tincture was dropped into the eye. The temporary smart, which its application always gives, very soon subsided, and was followed by a degree of ease, to which she had been long a stranger. It was repeated every day, for a fortnight, with the same good effect, the pain gradually abating; and from that time to the present, she has never had the smallest return of it.

C A S E III.

Thebaic Tincture, aided by Bleeding and Blistering, in violent and continued Inflammation.

Mr. S. about 35 years of age, was attacked with a most severe and painful inflammation in the right eye; which was much increased by close attention to business.—On the

third day from its appearance, the Thebaic Tincture was applied; which gave him extreme pain for near the space of an hour, without affording the usual subsequent relief. The same evening, he was blooded with leeches, and blistered on the right temple: in consequence of which, he found himself easier. The day following, the use of the tincture was repeated, and gave him the same pain as before. For several months, he had been subject to a violent aching in both temples: which, in the right, was much relieved by the use of the leeches and blister. On the ground of that experience, the same applications were made to the left temple; and with equal success, so far as regarded the pain in that part: but still the inflammation in the right eye continued as violent as ever. The tincture had been tried three times, previous to the last bleeding; and always gave the same pain, without procuring any ease or amendment. Three drops of a strong solution of Opium in water were therefore dropped into the eye, which

which seemed to deaden the pain; but, after a week's trial, there was still no change in the appearance of the inflammation. A third application of leeches was therefore made to the right temple, and followed with another blister: after which, it was again tried what effect the Thebaic Tincture would produce; when, and not till then, it was attended with no more smart than what it usually occasions; and, in a few minutes, the same ease succeeded as in other cases. It was repeated for ten days, night and morning: in which time, the inflammation wholly subsided, and the patient was perfectly cured.

In the former edition of the Remarks, three cases were here related, which had occurred in the course of Mr. Wathen's practice, many years ago; as additional proofs of the efficacy of the treatment, illustrated in the three preceding cases. But, these being thought sufficient examples in the branch of practice to which they relate, the three noticed by Mr. Wathen,

together with three others by myself, all included in the former edition, are now omitted.

C A S E IV.

*Repeated Bleedings, and other Evacuations,
used with the Tincture, in Case of Matter
formed from Inflammation.*

W. R. a fireman, about 23 years of age, by continuing in his wet cloaths when attending a fire, caught a violent cold; which brought on a fever, accompanied by an inflammation in his eyes. The latter complaint increased very rapidly, so that, in less than a week, he was unable to distinguish any object whatever; even though placed near him. He was first let blood in the arm, and made trial of many applications to the eyes, for the space of a fortnight, without the smallest benefit. At that period of the disorder, I first saw him. He complained much of a pain in his head, and of a tenderness which he felt in the back part of it, as if he had received

received some outward injury ; though, in fact, none had happened to him. The Tunica Conjunctiva, in each eye, was greatly inflamed, and in both, at the bottom of the anterior chamber of the aqueous humour, there was a collection of purulent matter. Besides this, I could perceive in the right eye a separate collection of matter, on the side of the Iris next the temple, nearly in the mid-way between its external margin and that which formed the pupil ; and, by the collected matter last named, the aperture of the pupil was also much contracted, and rendered very irregular.—In treating this complicated, and, as was then apprehended, most dangerous case, I began with dropping the Thebaic Tincture into the eye : at the same time, directing the application of three leeches to each temple, a large blister to the head, and a strong purge to be taken the next morning. The following day, the pain in his head was somewhat abated : but still the matter, collected in the aqueous humour, was as con-

siderable as on the preceding day. The use of the Thebaic Tincture was repeated: and the pulse, being quick and full, pointed out the necessity of further bleeding; which was accordingly done, by taking ten ounces from the arm. The happy effect was, that, on the third day, the quantity of matter collected in the left eye was evidently lessened, and the patient had so far the use of that eye, as to distinguish the light of a candle. The right eye then called for a more particular attention; since neither the Thebaic Tincture, nor any of the evacuations hitherto used, seemed to have made the least alteration for the better, as to any of the complaints which attended it. The leeches were therefore again applied to that temple, and afterwards a blister to the same part. The day following, that eye, as well as the other, became much easier. But, the matter behind the Cornea still remained to be visible in both; while the Tunica Conjunctiva likewise continued in a state of considerable inflammation.

Bleeding

Bleeding was then repeated by the mode of scarifying; which was performed with a lancet on the inside of both the lids; and, in this way, about fifteen or twenty drops were taken from each eye. The use of the Thebaic Tincture was continued every night and morning to both eyes; and, in the event, was always found to administer considerable relief. On the sixth day, the quantity of matter in both eyes, but particularly in the left, was apparently much diminished. The sight of that eye was gradually improving; and the right eye also then began to perceive the light. Notwithstanding all this amendment, the pulse yet continued to be quick and full; and, at times, the patient felt much pain in his head. Ten ounces more of blood were therefore taken from the arm. Linen cloths, wet with the Aqua Saturnina, were occasionally applied to both eyes, for the purpose of moistening and cooling them; while febrifuge and opening medicines were taken internally. In a fortnight, without further or different

ferent treatment, than the continued use of the Thebaic Tincture, the whole of the purulent matter, except that which adhered to the Iris of the right eye, was dispersed. This, it did not seem possible either to remove or lessen; but, resisting all the applications which had been made, or could be thought of, in the case, it at length formed a thick brown speck; in consequence of which, the contraction and irregularity of the pupil became fixed, and the Iris was incapable of those different movements, according to the degree of light communicated, which are of the last importance to perfect vision. Still, however, the following very important effects were accomplished. In about a month, both the eyes were entirely cured of the inflammation. The sight of the left eye was perfectly recovered; and that of the right to such a degree, as to be rendered very useful.

C A S E

C A S E V.

*Treatment of an Ophthalmy, consequent upon
a Gonorrhœa.*

A man, about the age of twenty-eight, having contracted a Gonorrhœa, put himself under the care of an Apothecary; who prescribed for him three grains of Calomel, with one of Camphor, to be taken every night. This was continued for a month, excepting some occasional intermissions, on account of the mouth becoming sore, as is the common effect of this medicine: when, instead of repeating the dose, gentle purges were given, for the purpose of carrying off the irritation complained of. After a month had elapsed, from the time when this medicine was first taken, it was then wholly laid aside; and, a gleety discharge from the Urethra still continuing, the Balsam Capivi, with other similar medicines, were taken for another month.

Toward

Toward the end of the second month, a small inflammation was first discovered in the inner angle of the right eye, and, in a few days more, the Tunica Conjunctiva, which lines the inside of the lids, as well as that part of it which covers the globe of the eye, was much swelled and inflamed. A physician was then called in, who prescribed a dram of *Æthiops Mineralis*, to be given in a bolus, three times in a day, with half a pint of a decoction of *Sarsaparil Root*, after each bolus. This prescription was followed for three weeks; but, at the end of that time, so far was there from being any degree of amendment, that, on the contrary, the swelling and inflammation were evidently much increased, and a purulent matter, in considerable quantity, was continually issuing from the eye. These appearances led the physician to consider the Ophthalmia as properly venereal; and that it was justly to be attributed to the *Gonorrhœa*, which had preceded. He therefore thought it necessary, again to have recourse to mercurials;

curials; and, accordingly, directed one dram of the Unguentum Mercuriale Fortius to be rubbed on the legs every night, and that the inflamed eye should be frequently washed with a weak solution of corrosive Sublimatè. At the end of a week, finding none of the common effects from the ointment, applied as above, he thought it expedient to order the use of it every morning, as well as night, and an increase of the quantity, from a dram to a dram and a half. This was repeated for three days; at the end of which, he discovered the same inflammatory disposition in the left eye, which had been perceived in the right at the beginning of the disorder. The day following, the inflammation in the left eye was much increased; and the Cornea of the right eye appeared wholly opaque. Then it was, that Mr. Wathen and myself were sent for; and, after a very particular and most careful examination of both eyes, the following appeared to be the state of them. The Cornea of the right eye was not only opaque,

opaque, but also ruptured; and through the wound, visible on its surface, we could plainly discover the projection of a small substance, of a blackish hue, as is not unusually seen in cases of this nature; and which, from its similar appearance to the head of a common fly, is spoken of by authors, under the name of *Myocephalus*. The *Tunica Conjunctiva* of the left eye was swelled, and, though not much inflamed, was covered with purulent matter. The gums of the patient were also much swelled; and his pulse was a little quickened, but not so full as common; both which were to be attributed to the mercurial medicines that had been administered. It was now become too evident, from the long use which had been made of these kinds of medicine, that no good was to be expected from them; and it was therefore agreed wholly to lay them aside. And, that no effects of the mercurial preparations might remain behind, the legs were washed, to clear them from all remains of the mercurial ointment, and

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the flannel waistcoat and drawers, which had been worn during the preceding course, were removed, and new ones substituted in their place. Having used these precautions, the first application then was to the lower lids of each eye, which were immediately scarified with a common lancet. In consequence of this, several drops of blood issued from them; the whole of a paler colour, than we may well suppose it would have been, before any mercurials had been used. The Thebaic Tincture was then dropped into each eye, three leeches were applied to the hollow of each temple, and a large blister was put on the back. The diluted Aqua Camphorata of Bates's Dispensatory was ordered for an eye-water; with which, the matter issuing from his eyes was to be washed off, once every hour, or oftener, if necessary: and, the next morning, a purge was given him, consisting of twenty-five grains of Jalap, with an infusion of Senna. For several days, the eyes still continued to discharge a large quantity of purulent matter; on
which

which account, the lower lids were again scarified, the two following mornings : and the Thebaic Tincture was constantly dropped into the eyes twice every day. On the fourth day, another purge was administered ; and on the fifth, a large blister was again applied to the back. At this time, the eyes were so weak, as not to admit the smallest degree of light without great pain ; for which reason, the shutters of the windows were kept almost entirely closed. On the seventh day, another purge of the same kind was given ; which, as well as the former, had all their proper effects : and then it was, for the first time, that the mercurial effects, which had taken place on the gums, appeared to be considerably abated, as well as the discharge from the eyes. The oppression, however, which nature still lay under, indicated the need of further evacuations ; and the success, which was now found to attend them, afforded no small encouragement to their continued use. Accordingly, in the course of another week, three leeches were
again

again applied to each temple ; and, to vary the mode of bleeding, for the purpose of obtaining more easily a larger quantity, cupping-glasses were applied to the nape of the neck ; by which six ounces were extracted. A blister was also afterwards applied on the same part. The whole of these means had the happiest influence, which could be expected, in diminishing, at the same time, both the discharge and the inflammation. The projection on the Cornea of the right eye was then touched, every other day, with the Lunar Caustic ; care being taken to wash the eye well with water, immediately after every application of it. Once on each of the intermediate days, the citrine ointment was also applied to the edges of the lids ; and they were every night covered with thick compresses, well wetted with the camphorated eye-water. No further alteration was necessary in the treatment of this case ; nor was any other application used, but that of the Thebaic Tincture twice a day, for about the

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space of a month, from the time when the case came under our care. By this time, the patient was able to return to his business, having preserved the perfect sight of the left eye; and the projection upon the Cornea of the right eye being also removed, though, from the state in which we found this case at our first attendance, it seemed to be rendered impossible, that the patient should ever again see through it.

C A S E VI.

An Ophthalmia, occasioned by a Projection of Part of the Iris through a Wound in the Cornea.

A boy about twelve years of age, being at school, at Douay in Flanders, received a blow on the left eye, from some gravel which was thrown at him. He felt no inconvenience from the accident until the sixth day after; at which time, the eye became considerably inflamed, and very painful.

painful. A surgeon in the town of Douay was consulted, who took blood from the left temple by two leeches; poulticed the eye with a roasted apple; and used many other applications. When he had remained six weeks under the same care without relief, he was brought to London; having at that time so far lost the use of the affected eye, as not to be able to distinguish any object, even though placed near him. Mr. Wathen was then consulted, whom I accompanied in the examination of the patient's eye. We could plainly perceive upon the Cornea, a little below the margin of the pupil, a dark coloured projection, about the eighth of an inch long; which, though considerably larger, was not very dissimilar to that noticed in the last case; and there described as resembling the head of a fly. This projection appeared to be caused, by a part of the Iris having forced itself through a wound in the Cornea. Not more than half the pupil could be seen; its lower half being covered, by a film on that part

of the Cornea which was contiguous to the projection: while the Tunica Conjunctiva, also, yet remained in a state of great inflammation.—We thought it necessary that the patient should lose more blood, and that it should be taken, as before, from the left temple; because that was nearest to the seat of the disorder. Accordingly, three more leeches were applied to the same temple; after which, a blister was also laid on that part. Having prepared the way by these evacuations, the Thebaic Tincture was applied to the eye, by one drop at a time, once a day, for three days successively; but without any effect, in abating either the inflammation or the pain. This put us on the still further expedient, of touching the projecting part by a caustic application, sufficiently strong to destroy it; the projecting part, by rubbing unequally against the inner surface of the eyelids, appearing to be the principal cause of keeping up the inflammation, with all its attendant symptoms. The Lunar Caustic was made choice of for

for this purpose. It was carefully applied to the whole surface of the projection; and immediately after it, two or three drops of water were dropped into the eye, to counteract its influence, if it should accidentally have reached too far. Notwithstanding every precaution in the manner of using the caustic, the pain it occasioned was severe: but, upon the application of the Thebaic Tincture, it soon subsided. In the course of the same day, the eye was frequently washed with the Aqua Vegeto-mineralis; and, the next morning there appeared to be some reduction, both in the size of the projection, and the degree of the inflammation. The Lunar Caustic was now re-applied in the same manner as before, and gave much less pain: and being continued, with the other applications, every day for a fortnight, the Ophthalmy was quite removed. And, notwithstanding the differences of appearance in the eye of the patient, from a perfectly sound one, in consequence of the partial opacity of the Cornea, and the

immoveable adherence of the Iris to it, he yet recovered a very useful sight.

C A S E VII.

A Case, pointing out Circumstances, under which the Corrosive Sublimate was taken inwardly with the best Effect.

A man, about thirty-five years of age, was suddenly seized with a pain in his right eye, which, in almost the same instant of time, was extended across the crown of the head, and communicated with the back of it. The pain increased so rapidly, and in so violent a degree, that, in the space of four hours, he wholly lost the sight of that eye, which was the seat of it; and became also, by intervals, quite delirious. Under the direction of some of the faculty, to whom he first applied, he took a purge, and afterwards other medicines, and made use of different applications, both to the eye and head, for three days; but found no relief.

relief.—On the fourth, when I saw him, the Tunica Conjunctiva of the right eye appeared to be violently inflamed; and the pain, which the patient had felt from his first attack, was so great, as entirely to deprive him of sleep ever since. The case was then treated as follows. Three leeches were immediately applied to the temple nearest the seat of the disorder; and afterwards a blister was put on the same part. The inflammation, at this time, rose so high, and had made the eye so extremely irritable, which was manifest from the fiery redness diffused over it, as to forbid the present use of the Thebaic Tincture externally. And all that could be ventured on, at present, was, supposing the pain to continue equally violent after the leeches had been applied, to order that twenty-five drops of the Tincture should be taken inwardly, on the patient's going to bed. This was done. But, on the following day, neither the inflammation nor the pain were in the smallest degree abated. Ten ounces of blood were then taken from his

arm: after which, trial was made of the Thebaic Tincture externally, by dropping a single drop of it into the eye. The effect of this application was, that, after causing the eye to smart severely for a few minutes, it procured the patient a small degree of ease. But this was only temporary; for, on the evening of the same day, the pain returned with its usual violence. Fomentations of poppy heads, as warm as the eye could bear them, had been frequently applied, in the course of my attendance, and were continued at this time; but, being found to afford no manner of relief, the use of them was laid aside; and in place of them was substituted a linen bolster on the eye, wetted, and kept in that state of moistness, with equal parts of brandy and water. This had some effect. But the benefit derived from it, on the third day from first using it, appeared to be so inconsiderable, while the pulse also still continued to be so full and quick; that it was then thought necessary to take ten ounces more of blood from the

the arm : and, the same symptoms of inflammation continuing to appear, the same operation of bleeding, and in the same quantity, was repeated no less than five times in nine days. These bleedings were accompanied with a large blister on the crown of the head, which was kept open a week ; while mild laxatives were also taken, for the purpose of procuring regular stools. During the use of these evacuations, the patient, for the most part, felt much less pain than before ; though sometimes, and particularly towards the evening, it returned, and in a very sudden manner, with great violence, both in the head and temple. This rendered the free use of opiates occasionally necessary, for the ease of the patient. Still the Tunica Conjunctiva was highly inflamed ; and so it continued to be, even at the distance of three weeks from the first attack : on which account, as well as the frequent return of pain which attended it, and which none of the methods, hitherto used, had been found sufficient to remove, it was then

then thought proper to introduce the use of the Corrosive Sublimate; of which, accordingly, trial was made, by taking the quantity of a quarter of a grain every night; and, during the use of it, half a dram of Red Bark, three times a day: continuing, all along, the external use of the Thebaic Tincture, and the wetted compresses, as before-mentioned; from which the patient always found some temporary relief. He had taken the Sublimate and Bark but three days, before the pain in the head entirely left him; and, in the space of a week, the inflammation in the eye was also considerably abated. After the use of both the Sublimate and Bark for ten days, the former was discontinued for one day; but, even in that short time, the pain in the head returned with violence. The use of the Sublimate was, therefore, again resumed; and it was assisted by warm gruel, of which he took a pint after every dose. Thus administered, the Sublimate had the effect of producing a very free perspiration; in consequence
of

of which, the pain was again removed. It was then continued a fortnight longer, while the Bark was omitted. Neither the pain returning, during that time; nor any other symptoms of the disorder appearing at the end of it; the use of all medicine and other applications was then wholly laid aside: and, from that time, the patient continued quite well, and has had as perfect a sight, with the eye which was disordered, as with the other.

C A S E VIII.

*An Ophthalmia produced by an Inversion of
the lower Lid.*

S. S. at about fifty years of age, applied to me, on account of an inflammation in her left eye, which had continued nearly two years; notwithstanding the use of various medicines and applications, recommended by different persons. On examining into the case, it was evident, that
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the inflammation was caused by an inversion of the lower lid, which occasioned the lashes to rub constantly against the eye. She had, for many years, been subject to convulsive fits, which affected every part of her body; and the disorder in the eye first came on, after a severe attack of this kind. I immediately applied sticking plaister to the lid, and continued it down upon the cheek; by which a fold was made in the skin below the lid; and this effectually answered my design, of keeping out the edge of it, so long as the plaister remained well on the part: but, after trying it for several days, I found, that it was very liable to slip; and that, when this happened, the lid immediately returned to its inverted state. I therefore fixed an instrument, something similar to that contrived by Bartischius, and represented by Heister, (plate 15, figure 20) upon the skin below the lid, and let it hang upon the cheek; which, by its weight, kept the lid from becoming inverted: but, as the benefit it produced was only temporary,

and

and the pinching of the skin, which was necessary to confine it, gave the patient pain; I soon omitted the use of it, and, with Mr. Wathen's consent, performed the following operation:—I first took off a transverse fold of the skin, below the edge of the lid; and, then, by three sutures, confined the sides of the wound close to each other. The day after the operation, the integuments, surrounding the eye, were considerably swelled; but the swelling soon subsided, by the use of the Aqua Saturnina, applied as a fomentation. No difficulty afterwards occurred: the eyelids continued constantly in their natural state; the inflammation of the eye was speedily removed; and the patient became perfectly well.

Some time after, the same woman applied again, with an inflammation in her right eye, which arose, like the former, from an inversion of the lower lid. The left eye had been quite well ever since the operation. The same was performed on this eye; and, being followed with the fomen-

fomentation, as before; to reduce the consequent swelling, it as readily effected a perfect cure.

CASE IX.

Communicated by a Gentleman of the first Rank in his Profession.

An Ophthalmy produced by an Inversion of the upper Lid.

“The worst kind of Trichiasis, which
 “I ever saw, was in a young Gentleman
 “about 18 years of age. Previous to
 “my seeing him, he had repeatedly un-
 “dergone the usual discipline of extract-
 “ing the hairs from the Cilia: but, when
 “they grew again, they took their usual
 “course towards the Tunica Conjunc-
 “tiva; and by continual irritation of
 “that membrane, gave constant pain,
 “and produced, what writers on diseases
 “of the eyes call Chemosis, and what
 “gives me the idea of fungous flesh, or
 “ of

“ of a villous surface, resembling the pile
 “ of red velvet. After a variety of treat-
 “ ment, as bleeding, purging, blistering,
 “ setons, bark, alteratives, and the use
 “ of every other method, which the most
 “ eminent practitioners, both in physic
 “ and surgery, could think of; recourse
 “ was had to eye-waters and salves, and
 “ the Panaceæ of the most celebrated em-
 “ pirics of the time: but all proved in-
 “ effectual, and the young Gentleman
 “ became totally blind.

“ At this period I was consulted, and
 “ at the same time was asked, if I had
 “ any objection to the opinion of a cele-
 “ brated itinerant Oculist, who was at
 “ that time in England. I said, certainly
 “ not. We accordingly met; and when
 “ we had examined the eye, and heard
 “ what had been done, he proposed the
 “ taking off a fold of the skin of the su-
 “ perior Palpebra. I told him, I should
 “ not object to his making the attempt,
 “ if the gentleman and his father gave
 “ their consent: though I own, it was

“ my opinion, that it would not succeed.
 “ At that time, I had not considered the
 “ case sufficiently, though I intended to
 “ do it very critically before we met
 “ again. A day for the operation was
 “ fixed: but, previous to that, the Ocu-
 “ list sent a message to the young Gen-
 “ tleman’s father, which discovered the
 “ true Charlatan, and immediately deter-
 “ mined the Gentleman not to have any
 “ thing more to do with him. I was
 “ again sent for: and, having well con-
 “ sidered the case, I freely delivered my
 “ sentiments, that the method which had
 “ been proposed, did not seem likely to
 “ me to be successful: as the fault was
 “ not in a superfluity of skin, but in a
 “ relaxation of the Elevator Palpebræ su-
 “ perioris muscle. Having premised this,
 “ I recommended, and performed the fol-
 “ lowing operation: I made an incision
 “ through the integuments of the upper
 “ lid, from the inner angle of the eye to
 “ the outer; I then separated the fibres
 “ of the Orbicularis, so as to denudate
 “ the

“ the expanded fibres of the Elevator
 “ muscle, as near to their termination in
 “ the edge of the lid as possible; which
 “ being done, I applied a small caute-
 “ rizing iron, adapted to the convexity
 “ of the globe of the eye, and made pretty
 “ warm, by passing it two or three times
 “ over the tendino-carnous fibres. My
 “ intention, in this, was to occasion a slight
 “ irritation, which, I hoped, would pro-
 “ duce the same effect, as we frequently
 “ observe to happen after burns in dif-
 “ ferent parts of the body, especially in
 “ the hands, after which the fingers often
 “ contract, and in many instances have
 “ remained contracted ever after. This
 “ happy effect took place in the present
 “ case: and, though the eyelid was kept
 “ constantly higher than I could have
 “ wished, the Trichiasis was cured, the
 “ inflammation subsided, and the eye be-
 “ came useful.”

Mr. Wathen lately effected the cure of
 a Trichiasis of the lower lid, which had
 continued a long time, in opposition to

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various

various attempts made for the relief of the patient, by means of a ring nearly oval in its form, and adapted to the size of the orbit. The ring, covered with black silk, was applied on the outside of the lids; and so as that its lower edge should press gently, under the ciliary cartilage of the lower lid. By means of this, the upper edge of this cartilage, out of which the eyelashes grow, was turned outward, and the preternatural inversion of the lid prevented. On the upper edge of this ring, both on that side next the temple, and that next the nose, was a projection of about half an inch; serving for holds to the ribbands, which, fastened to them, were carried round the head, and tied behind.

Probably, the same instrument might become equally serviceable, in cases where the upper lid was inverted; making only such small alterations, in the manner of constructing and fixing the ring, as the different situation of this lid may point out or require.

Of

Of the Psorophthalmia, or Inflammation and Ulceration of the Eyelids.

IN the description of the eye, prefixed to these remarks, it has been observed, that the Tunica Conjunctiva is continued from the inside of the eyelids, to cover the anterior part of the globe of the eye. Whenever, therefore, that part of this tunic, which covers the globe, is inflamed to any great degree, that which covers the eyelids is liable to be affected in the same manner: but, as this is no more than a symptom, or immediate effect, of the Ophthalmia; it will, in general, be found to go off, as soon as the disorder, by which it is occasioned, is removed.

This, however, is not always the case. In some instances, the inflammation of the lids is attended with an ulceration of

their edges, upon which a glutinous matter lodges, that incrusts and becomes hard; and, when they have been long in contact, as, during sleep, connects them so closely to each other, as to require painful efforts for their separation.

Now, this is the disorder, of which I propose here to treat. I have called it Pforophthalmy*: because that name is more descriptive of its nature, than any other I could find.

To form a clear idea of the Pforophthalmy, it should be remembered, that on the inside, and near to the edges, of the eyelids, is situated a number of small glands, secreting a sebaceous fluid, which is excreted by a row of ducts, opening immediately on the inner edges of their border. These ducts, and sometimes the glands themselves, appear to be the parts principally affected; and the fluid, which is secreted by them, instead of being moist

* Castellus defines the Pforophthalmy to be *Oculi palpebrarum scabies pruriginosa*.

and mild, and serving as a defence against the acrimony of the tears, is changed into a sharp, acrid, and adhesive humour; which causes a constant irritation of the eye and lids, ulcerates the inner edges of the latter, and, for want of proper attention, has often perpetuated the disorder for a great number of years.

St. Yves describes this complaint, more accurately than any other author I know, in a chapter, "*On the Ophthalmy subsequent to the Small-pox.*" He there observes, "that the pustules on the edge of the cartilage of the eyelids, which penetrate between the Cilia and their inner surface, do not cicatrize, by reason of the acrimonious serosity which incessantly humects the eye: hence follow ulcers, which last sometimes several years, and even during life, if they be not remedied*."

It must, however, be remarked, that, though both the Small-pox and Measles

* St. Yves, page 191.

are certainly very frequent causes of this complaint, they are not the only ones. An inflammation of the globe, in itself but small, will sometimes affect the lids, so as to cause them to swell and become red; in consequence of which, there will be an adhesion of one to the other, and, often, an universal ulceration of their edges. The small pustules, also, which form on the outer margin of the ciliary edge, where the lashes grow, and are known by the name of Styes, have, in some instances, brought on an inflammation which has been continued to the sebaceous glands, and produced all the consequences before described: but, in general, styes give no trouble; they break, and then disappear.

The ulceration in the Pforophthalmy is usually confined to the edges of the eyelids; but, sometimes, it is seen to extend over their whole external surface, and even to excoriate the greater part of the cheek. In cases of the latter kind, the inflammation which accompanies, has often
much

much the appearance of an Erisipelas, and will receive most relief from cooling applications. The use of the citrine ointment, which will hereafter be recommended, must, in such instances, be deferred, until the irritability of the skin is in a good degree abated.

This disorder is also, sometimes, attended with a contraction of the skin of the lower eyelid; in consequence of which, that lid is drawn down, and the inner part turned outward, so as to form a red, fleshy, and most disagreeable appearance, called Ectropium. Whenever this happens, it proves the complaint to be of the most obstinate nature; though it is generally removed by the cure of the Pforophthalmia, which is the occasion of it.

Several ancient, as well as modern, writers have given an account of disorders affecting the edges of the eyelids, which bear some resemblance to that I am now describing: but these are represented, either as so slight and trivial, on the one hand, that (if nature requires any assist-

ance) the most simple applications to the part affected will be found sufficient for the cure ; or else, they are, on the other hand, described as symptoms of the Scrophula, Scurvy, or Lues Venerea, and as incurable by any external means, until the supposed disorder in the habit is properly corrected. Now, it should seem, that these last-mentioned effects, which they impute to scrophulous, or other internal, causes, are, in reality, the very same disorder, to which I have given the name of the Psorophthalmia ; though, in their accounts, we meet with no accurate description of its seat, progress, or effects. And I am further of opinion, that it is much oftener a local complaint, than is generally believed : for, in what manner can it be determined, that it arises from a scrophulous or venereal cause ? This, I apprehend, can only be known, with certainty, from the appearance of such other symptoms, as are clearly scrophulous or venereal : whereas, numberless cases continually occur, in which the eyelids alone are affected, without

out a single symptom of any other disorder whatever; and to which, all the common methods of relief have been applied in vain.

I proceed, therefore, to give a more particular description of the Pforophthalmy, according to the ideas which, from experience, I have been led to form of it. And, in cases of this kind, I consider the ducts of the ciliary glands as really ulcerated: whence it arises, that the oily soft fluid, secreted by these glands, being mixed with the discharge from the ulcers, is changed into an acrid humour, which quickly forms into a hard adhesive scab. Nor will the complaint stop here: for the scab, lodging on the orifices of the ducts, by the irritation it occasions, will necessarily spread the humour, till it has infected the whole internal edge of the lid: and no effectual relief can be administered, but by suitable applications for a cure of the ulcers, which are the original cause.

But though I am of opinion, that the Pforophthalmy, often, and most commonly,
takes

takes place, intirely independent of any other complaint; (at least, as far as can be discovered,) it is yet necessary to be observed, on the other hand, that it is sometimes accompanied with the plainest marks of a scrophulous constitution, and seems evidently to arise from it. In the cases now referred to, as also in scrophulous cases of all sorts, a variety of internal medicines have, at different periods, been recommended. I shall mention a few of the principal.

The Extractum Cicutæ was proposed by Dr. Storck of Vienna, as a medicine very proper for the cure both of the Cancer and Scrophula: and he has given twenty cases, in which, under his management, it met with the desired success, though not before it had been long used. The dose, given by him at first, was a pill consisting of two grains, to be repeated twice a day; which was afterwards increased to three pills each dose, and repeated three or four times in the same space. Dr. Storck does not mention the Pforoph-

Pforophthalmy, as accompanying any of his cases, but observes, that in several different complaints of the eyes, he had given it with good effect: notwithstanding which, to conclude the whole, he adds, “in malis inveteratis plerumque “frustra fuit.” Dr. Fothergill, in the third volume of the London Medical Observations, gives it as his opinion, that the *Cicuta* is much more beneficial in scrophulous, than in cancerous, distempers, but confesses, it is not always attended with equal success.

The Cortex Peruvianus, also, has had a great number of advocates. In the first volume of the London Medical Observations, Dr. Fothergill and Dr. John For-
dyce particularly reecommend it for inveterate Ophthalmies. They both agree, in supposing it will resolve glandular tumours; and Dr. Fothergill proposes it to be joined with Calomel pills, though his chief dependance is upon the Bark.

The internal use of the sea water, and bathing in the sea, for scrophulous complaints,

plaints, have been approved and recommended by the most eminent physicians, for a great number of years; and seem to have acquired a solid reputation. I must, however, take the liberty to remark, that sea-bathing is highly improper, in every inflammatory disorder to which the eyes are liable; and I have frequently observed, that it brought on very violent pain, and much aggravated the complaint.

Many mineral waters, found in this country, are likewise much esteemed for their salutary effects, when taken for the Scrophula.

But, however judiciously these, or internals of any kind, may be prescribed, they are absolutely insufficient in themselves for the cure of the Pforophthalmy; but must be assisted by proper applications to the part affected. The number of patients we meet with, who have gone through some, and even all, of these processes, without any kind of benefit, are sufficient evidences of the truth of the assertion: and this will be more apparent, if we re-
collect

collect, how many other external disorders we daily see, which are known to proceed from internal causes, and yet require a topical treatment.

I go on to speak of the proper applications, for the cure of the Pforophthalmia. And here it will be necessary for the reader carefully to attend to the description, before given, of this disorder: (see pag. 105.) for, on a due consideration of what I have there said, it will appear, that my design must be, to soften and remove the scabs; and to use such applications to the ulcers, as may correct the acrimony of the discharge, promote digestion, and bring them into a state for healing.

The intention of Monsieur St. Yves, in his direction for the cure of ulcers on the edges of the eyelids, subsequent to the Small-pox, does not appear to be much unlike that which I have here mentioned; as appears in the following quotation I have made from him: " Ophthalmic waters, in general,
" are

“are of very little service; but I have
 “found, from my own experience, that,
 “by touching them with the Lapis In-
 “fernalis, they cicatrize easily. The
 “violent heat of the caustic must be
 “abated, as soon as they have been
 “touched, by washing the eye in a small
 “glass full of warm water; you must,
 “above all, take care, that the part of
 “the eyelid, which was cauterized, may
 “not bear against the globe of the eye,
 “till the pain is entirely gone off. They
 “may be touched, in this manner, once
 “or twice a week, till they seem to re-
 “quire no more use of the caustic; then
 “lay on these places, morning and even-
 “ing, Tutty reduced to a very fine pow-
 “der; it will cicatrize them*.”

Now, though the intention of Monsieur
 St. Yves, in the above advice, is similar to
 that I have mentioned; yet the danger of
 applying a caustic, so powerful as the
 Lapis Infernalis, to a part so tender as the
 edge of the eyelid, and so near the eye, ap-

* St. Yves, page 194.

pears to be a real objection against its use; and has, I believe, deterred most of the faculty from following the practice: and yet it is remarkable, that, amidst all the late improvements in surgery, no other outward application has been communicated to the world, as far as I know; which, from its experienced utility, we have sufficient ground for adopting, as a general remedy under such complaints.

To supply this deficiency, in so important a branch of practice, is one principal design of the present publication. For this purpose, I would recommend the use of the Unguentum Citrinum of the Edinburgh dispensatory, the composition of which is as follows:

℞

Hydrargyri unciam unam,

Spiritûs nitri uncias duas.

Digere super arenam, ut fiat solutio, quæ calidissima adhuc misceatur cum Axungia Porcinæ liquefactæ et in coagululum denuo tendentis librâ unâ, strenue

*strenue agitando in mortario marmoreo
ut fiat unguentum.*

If it is well made, it forms a hard salve, of a full yellow colour: but if the proportions are not exact, or the lard is added either too hot, or too cold, it will want both its proper colour and consistence; and its success will be much less certain than it otherwise would be.

The manner, in which it is to be used, is as follows: Fill a small box with it; let it be warmed by holding it before a candle, till the top of it is melted into an oil: this oil is to be taken off upon the end of the fore-finger, or upon the point of a small pencil brush, and carefully rubbed into the edges of the affected eyelids. The use of it once in twenty-four hours, will be sufficient; and the best time is, when the patient goes to bed. Immediately after the application, a soft plaister, spread with the Ceratum Album, is to be bound loosely over the eyelids, which will preserve them moist and supple in the night,

night, and contribute to prevent their adhesions to each other. Notwithstanding this, some difficulties will always attend the opening them in the morning: for the further relief of which, it will be found of great use, to cleanse them with milk and fresh butter, well mixed together, and warmed; which will gradually soften and remove the incrusted matter, and, in a short time, enable the patient to separate them without any pain.

The Psorophtholmy is often accompanied with a greater or less degree of inflammation, on the globe of the eye: the thebaic tincture will therefore be of the same use, as in the cases of the Ophthalmia already given.

I have before said, that a scrophulous constitution is sometimes the source of this disorder. In that case, though the patient is perfectly cured, as far as respects the external symptom, there is yet great danger of its returning on some future occasion. To prevent this, it is of the utmost importance, to pursue an alterative course

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of

of medicine for a considerable time; besides which, an issue should also be opened, to divert the humour from the eye. The good effects of these are, however, not to be expected, without the strictest temperance in diet, and a general habit of regularity in living. In some instances, it will so happen, that no discharge can be procured from the issue: and when, upon trial, this is found to be the case, a perpetual blister, or some other drain, must be substituted in its stead.

I shall now relate, in proof of the utility of the method of cure I have been describing, a few cases, which have come within my own experience or knowledge.

CASE

C A S E X.

A Pterophthalmia and Ophthalmia united.

A child, when about ten months old, was suddenly seized with a swelling of the eyelids, attended with a considerable discharge of matter from between them. For this complaint, she was under the care of an apothecary, who gave her a variety of medicines, and washed the eye with many different eye-waters; notwithstanding which, the disorder continued near twelve months, with great violence, and caused considerable pain. At first, the right eye only was inflamed; but afterwards, the left also was affected; and, in that eye, the inflammation became the most obstinate and troublesome. At length, her friends carried her into the country, where she recovered; which, they supposed, was owing to the change of air. Notwithstanding this, when the

child was about four years old, the same disease returned in the left eye, with equal violence ; but was relieved in a very short time, by the use of an ointment given by a stranger. She continued well for near twelve months, when the left eye became again affected, as in the last relapse. The ointment, which had before cured her, was now tried without any success. She took physic every third morning, for several weeks, but was still unable to look at the light ; and the eyelids were much inflamed and swelled. In this state, I first saw the patient ; when, the lids being separated with difficulty, I discovered a large speck, which appeared to cover the greater part of the Cornea. I advised the application of three leeches, and a blister, to the left temple : the Thebaic Tincture was also made use of ; and, being found to give great ease, was repeated every day. In a fortnight, the inflammation was considerably abated, and the child could open her eyes with ease : but, still, the edges of the lids appeared red, and adhered much
to

to each other during the night; on which account, the citrine ointment, and white cerate, were applied at bed-time; and the mixture of warm butter and milk, when she waked in the morning. In ten days more, the inflammation was wholly removed both from the eyes and eyelids: the speck, also, which at first appeared to cover the whole pupil, was greatly reduced, and the sight was so far restored, as to become very useful. An alterative powder, composed of *Æthiops Mineralis* and *Cremor Tartari*, was given twice a-day; and towards the completion of the cure, an issue was opened in the left arm. The sublimate eye-water was continued a long time after the other applications, on account of the speck; which, though it in part remains, as is well known to be usual in such cases, was, however, by this means, gradually and greatly diminished.

C A S E XI.

A Pforophthalmie unattended with any other Complaint.

The foreman of a pewterer had, for several years, been subject to a weakness in his eyes, accompanied with a frequent fore-ness on the edges of the lids, causing them so strongly to adhere to each other, as put him to great pain, in separating them, when he awoke in the morning. The foreness at length returned so often, and became so troublesome, as to determine him on asking Mr. Wathen's advice. The case answered exactly to the description of the Pforophthalmie; and accordingly the Citrine Ointment, and White Cerate, were immediately ordered to be applied. The first trial of the ointment, (owing to the undue quantity which the patient, by mistake, used) gave him so much pain, that he could not be persuaded, for the present, to repeat it: notwithstanding which, from
this

this time, his eyelids began to mend ; and, in three weeks, by the use of the Cerate alone, he was apparently cured. He continued well a month ; at the end of which, the same complaint returned, though in a less degree than before. He was again urged, and with difficulty persuaded, to use the Citrine Ointment, in a more cautious manner, so as not to touch the globe of the eye. It gave much less pain ; and, in a few days, the complaint was entirely removed. Some weeks after this, he had another relapse, and was relieved as speedily, by the same application. Since this time, he has had no return of any consequence ; and, as soon as he perceives the least tendency to it, he recurs to the ointment, which is always sufficient to remove it.

C A S E XII.

A Psorophthalmia, with an Ophthalmia and Specks.

An apprentice to a mathematical instrument-maker in the city, about seventeen years of age, having had the small-pox when he was only two years old, was, ever since that time, subject to frequent, and almost continual, complaints on the edges of his eyelids. They were red, sore, and adhesive; and an inflammation sometimes extended from them to the eyes, and continued upon them for months together; depriving him of sight, and disabling him from attending his school, when he was a child, or his business, after he was an apprentice. The inflammations had left specks in both eyes, which occasioned, in a greater or less degree, a constant obscurity in the sight. Great quantities of medicine had been taken; and various eye-waters, ointments, &c.

&c. had been used, without any effect. After undergoing much pain for some time, he, by my advice, began the use of the Citrine Ointment and White Cerate. They had been tried only three days, before I found, that the edges of the lids were much softened, became more easy, and adhered less together, when he awoke in the morning: the redness, which extended to the globe of the eye, also subsided, after a few applications of the Thebaic Tincture. By these means, and with no other assistance, but that of an electuary, which, while it acted as an alterative, served, also, to keep the body gently open, the patient gradually mended; and, in less than a month, the complaint in the lids was entirely removed. More than two years are passed since the cure, and the patient has not had the smallest relapse: the specks, also, by the continued use of the sublimate water, have been so far reduced, as to form little or no obstruction to the sight, and, indeed, not to be discernible without close inspection.

C A S E

C A S E XIII.

An inveterate Psorophthalmia of long Continuance.

Mrs. P. a lady in the city, five years since, was seized with a soreness upon the edges of the right eyelids, which gave her great pain, and frequently inflamed the eye. Various internal medicines were administered, with some externals, by an apothecary; who supposed it to proceed from a scorbutic acrimony in the constitution: but, after a considerable time had elapsed, without any amendment, a physician was consulted, who prescribed other medicines, with a similar intention, but with no better effect. She afterwards went to Rochester, and put herself under the care of a woman, who is much celebrated, in that place, for curing obstinate complaints of this nature. This person used different topical applications, without affording any relief; and the patient,

tient, after a trial of two months, came
 away worse than she went. Both eyes
 were now so bad, that she was obliged,
 for several months, to sit in a room to-
 tally dark. During this time, she made
 trial of various remedies, both external
 and internal; some of which were re-
 commended by her friends, and others by
 the faculty. Notwithstanding all, the
 soreness of the eyelids increased, the ex-
 coriation spread toward the cheek, and
 the pain was without intermission. A
 perpetual blister had been put on her
 back, an issue made in her arm, and
 leeches repeatedly applied to the temples.
 A surgeon of reputation was consulted;
 who, after a long attendance, declared
 himself unable to do her service, unless
 she would submit to have a seton in the
 neck; which she refused. About a year
 and a half from the commencement of
 her disorder, the Citrine Ointment,
 &c. were proposed to be used in the
 manner before directed. The extreme
 soreness of the lids caused the first appli-
 cation

cation to give more than common pain: it was, however, regularly repeated; and, at the end of a week, the lids assumed a more favourable aspect, and the eyes began to bear the light. As the lids mended, the pain from the application abated, and, in a short time, wholly ceased. Their adhesions to each other became every day less; and, in six weeks, the foreness was intirely gone off, and they returned to their natural appearance. Her eyes now look as well as if they had not been at all disordered, and her sight is, in common, equally good as ever; though, at times, she has found a degree of tenderness in the lids, which has called for the use of the ointment, and she has always experienced immediate relief from it.

C A S E

C A S E XIV.

A Pforophthalmia, with an Everſion of the Lids.

A man, who is now about fifty years of age, applied to Mr. Wathen, ten years ago, with a diſorder in the lids of both eyes, which had not only ulcerated their edges, but cauſed them to ſwell very conſiderably; and the inſide of the lower ones was turned wholly outward. He had laboured under this complaint three years, during the greater part of which time, he had been totally diſabled from any buſineſs. For hours after he awoke in the morning, he was obliged to keep his eyelids cloſe, on account of their adheſion; and, when he attempted to ſeparate them, they would ſometimes bleed, and give him extreme pain. Various medicines and externals had been tried, without any effect. Mr. Wathen directed the ſame applications, as were uſed in the laſt caſe.

case. The Citrine Ointment caused a great smarting, when first applied; but, after three days, the patient was able to open his eyes, with a degree of ease, to which, from his first seizure, he had been a stranger. His amendment was slow, but progressive; and, at the end of two months, the eyelids were restored to their proper state, and natural appearance; and the patient has enjoyed a full and perfect sight from that time to the present.

*Of the Purulent Eyes of New-born
Children.*

THE Tunica Conjunctiva is defended from the acrimony of the tears, by a soft thin mucous fluid, which is supposed to issue from innumerable small perforations, dispersed, according to Winslow, all over its surface. This fluid, in its natural state, is very small in quantity; on which account, being also pellucid, it is undiscernible by the naked eye: nevertheless, it is liable, by an irritation or inflammation of the parts which furnish it, not only to be increased greatly in quantity, but to be so altered and changed in quality, as very much to resemble pus itself, both in consistence and colour. Such, I suppose, was the state of St. Yves's patient, which has before been considered

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(Page 26); and which he, in my opinion attributed, erroneously, to the Metastasis of a recent venereal virus. To the cases referred to in his account, a few others might be added: nevertheless, I cannot but observe, that such instances are very rarely to be found; nor, in common, is the disorder, in patients of this class, altogether the same as in new-born children.

In the latter, it first discovers itself by a redness in the eyelids, which, also, in a short time, swell to a size so large, as to prevent their being separated, without the utmost difficulty: after this, a constant discharge of thick yellow matter soon succeeds; which, if the lids can be separated, will be seen to spread over the eye, so as entirely to cover it. In common, both eyes are affected nearly in the same manner: and, in bad cases, whenever the child cries, the inside of the lids is turned outward; which is also the case, whenever an attempt is made to separate them with the fingers. This is sometimes
the

the constant state of the lids: and though they should be restored, by the fingers, to their proper situation; yet, on being left to themselves, they immediately return to their former everted state.

The purulent eye is usually unconnected with any other disorder; and is supposed to arise from the child's being imprudently exposed to the cold air: but it is occasionally accompanied with eruptions on the head, and other parts of the body; and I have, more than once, seen it attended with evident signs of a scrophulous constitution.

The swelling of the eyelids, necessarily occasions a tightness, or constriction, of their ciliary edges; by means of which, the matter, which is formed on the inside of them, is prevented from wholly running off: and its continuing, between the lids and the globe, serves still further to increase the inflammation; and is, also, the frequent cause of ulcers and specks, which very often partially, and

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some-

sometimes totally, cover the pupil. These effects may, in a great measure, be produced by the acrimony of the matter : but, separate from that, the retained fluid, whatever its quality be, by continually lodging on the eye, is sufficient to destroy the transparency of the Cornea ; and, when it has been joined with the pressure of the swollen eyelids, it has been known, to cause the Cornea to BURST ;—the humours to be partially or wholly discharged ;—and the eye, of course, to sink in the orbit.

The cure of a disorder, which is known to be attended with such hazardous, and even fatal, consequences to the eye, is an object of no small importance : and, yet, it is undeniably true, that the common methods, which have been used, have, for the most part, been found insufficient for this salutary end. Without enlarging upon them, I shall proceed to lay before the reader the description of a method, that I have found, in a great number of instances, to give speedy relief.

An

An increased discharge, from the minute pores of the Conjunctiva, seems to constitute the first stage of the complaint: and this symptom, without doubt, indicates the necessity of immediately constringing the relaxed vessels, in order to check the redundant discharge. Nor is this intention less proper in the subsequent, than in the earliest, stages of the disorder. Certainly, the sooner it is pursued, the better. It may, however, have a considerable good effect, though the discharged matter should be changed to a purulent appearance; and even though it is turned quite yellow, and accompanied with so high a degree of acrimony, as to erode and rupture the Cornea. That my meaning here may not, however, be mistaken, it is necessary to observe, that though the words, matter and purulency, have frequently occurred on this subject, they never were meant to imply the actual existence of pus; but were used as terms, the best fitted that

could be found, to express that similar discharge, which takes place in this disorder. For, here, as in the Gonorrhœa, and some affections of the Schniderian, and other membranes, such words are commonly used, to express the quality of their augmented excretions: whereas, no ulcers are supposed to exist in those cases, and, consequently, no real pus can be formed. The case, therefore, being rightly understood (that the discharge from the eye is not real pus, but only mucus, increased in quantity, and altered in colour, by some irritating cause), the application of astringents, in every state and degree of the disorder, will appear to be as reasonable, as it has been found to be successful. For this purpose, I have, for a considerable time, and Mr. Wathen for a much longer, made use of the Aqua Camphorata of Bates's Dispensatory: and, from experience of its great utility, can, on the best ground, strongly recommend the application of it, in cases of this nature. It is made as follows:

Vitriol.

R

Vitriol. Roman.

Bol. Armen. aa ʒjv.

Camphor. ʒj. m. f. pulvis,
de quo projice ʒj. in aquæ bullientis ℥jv.
amove ab igne et subsidant fæces.

It is plain, from the nature of the ingredients, which form this composition, that it must possess a strong styptic quality: and on this its great efficacy, in the disorder here treated of, chiefly depends. It is, however, much too strong for use, before it is diluted; and the degree of its dilution must always be determined by the peculiar circumstances of each case: nevertheless, I may venture to recommend about one drachm of it, to be mixed with two ounces of cold clear water, as a medium or standard, to be increased or diminished, as occasion may require.

It must also be evident, from the preceding description of the purulent eye, that neither this, nor any other medicated fluid, can be well applied to the

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affected

affected part, by means of a steam, fatus, cataplasm, or drops: but, that it requires some small degree of force, to send the liquor between the swelled Conjunctiva, which lines the eyelids, and that part of it which covers the globe of the eye. This cannot be better effected, than by the use of a small ivory or pewter syringe, terminating in a blunt pointed cone. The extremity of the syringe is to be placed between the edges of the eyelids, in such a manner, that the medicated liquor may be carried over the whole surface of the eye; by means of which, the retained matter will be entirely cleared away, and enough of the styptic power of the medicine left behind, to interrupt and diminish the excessive discharge.

It should be remembered, that the quantity of matter, collected under the lids, varies much in different cases; and that, in bad ones, it is formed with amazing rapidity. According to this variation, the strength of the medicine, and the frequency of repeating it, must always

ways be regulated. In the mild or incipient state, it may be sufficient to use it once or twice a day, and somewhat weaker than the standard: but, in the worst and most malignant species, it becomes necessary, to repeat it once or twice every hour, and to increase its stypticity, in the same proportion; and when the disorder is, in some degree, subdued, the strength of the lotion may be reduced, and it may be repeated less frequently.

The reasons for a frequent repetition of the means just mentioned, in bad cases, are, indeed, of the most urgent nature. Until the Conjunctiva is somewhat thinned, and the quantity of the discharge diminished, it is impossible to know in what state the eye is; whether it is more or less injured, totally lost, or capable of any relief. The continuance, or extinction, of the sight frequently depends on the space of a few hours: nor can we be relieved from the greatest uncertainty, in these respects, until the Cornea becomes visible.

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During

During the swelling of the eyelids, emollient cataplasms have been recommended, in books, and are very commonly used; but they are immediately opposite, in their nature, to the method of cure here laid down; and, in the cases which I have seen, after they had been used, I never could observe the least benefit to be derived from them. On the contrary, I cannot but be of opinion, that they tended to increase the relaxation of the parts; and, in that way, became an additional cause, to keep, up and increase, the morbid humour.

Those cases, particularly, in which the inner parts of the eyelids are turned outward, appear to be caused by the extreme relaxation, and swelling, of the Tunica Conjunctiva. This membrane being forced outward, by the child's crying, or by any other means, is prevented from returning to its natural situation, by the cartilage called Tarsus; which, preserving its natural strength and elasticity, acts as a tight band, to keep it out. Now, to add
to

to this swelling and relaxation of the Conjunctiva, by emollient applications, in any form, must, surely, be acting against, instead of forwarding, the cure.

In the place of such cataplasms, whenever any applications of that kind are thought necessary, they, also, as well as the lotion, should have a tonic, or mild astringent property; and I would particularly recommend one, that is made of the curds of milk, turned with alum, and an equal part of Unguentum Sambuci, or Axungia Porcini. I have found this to be highly useful. It should be applied cold, and frequently repeated, without intermitting the use of the injection.

It sometimes happens, that the matter formed between the lids is of a glutinous and adhesive nature; causing the eyelashes to stick to each other, after they have been closed for any length of time. In this case, after the cataplasm above mentioned is taken off, and before the lotion is injected, it will be proper to wash off the adhesive matter, with a
 little

little fresh butter, dissolved in warm milk, or with some other soft, oleaginous, liquor.

The eversion of the lids has so disagreeable an appearance, that it greatly alarms those who are unacquainted with the disorder; particularly, as is sometimes the case, when such is their continued state. If it takes place only when the child cries, and disappears as soon as the crying ceases, nothing more need be done, than to use the applications above recommended; and, as the swelling of the *Conjunctiva* abates, this symptom will likewise go off: but, if the eversion is constant, it will be necessary to repeat the injection, oftner than in other cases; and to employ a person, immediately after the use of it, to return the lids, and then to hold on them with the finger, for some length of time, a compress dipped in the diluted *Aqua Camphorata*, and which, as it dries, is to be repeatedly moistened with this liquid; that the lids, being restored to their natural state,

state, they may also recover their proper tone and strength.

Where the swelling and inflammation have been considerable, I have, sometimes, also found it necessary to take blood from the temples. In those very young subjects, who are most commonly affected by this disorder, one leech, applied to each temple, seems fully sufficient to answer the purpose; immediately after the use of which, I have, in general, directed a small blister to be applied on the same part, and sometimes a large one between the shoulders.

Internals of the absorbent and laxative kind should also be given, to keep the body cool and open; such as Rhubarb, Magnesia, Manna, &c.: and, if there is reason to be apprehensive, that the general bodily habit is under the influence of any particular bad humour; in that case, gentle alteratives should be added, such as the *Æthiops Mineralis*, or small doses of *Mercurius Dulcis*.

In

In cases, where the inside of the eyelids has been much inflamed ; I have also applied, with good effect, the Thebaic Tincture, as recommended in the chapter on the Ophthalmy.

C A S E X V .

Both Eyes purulent, in an Infant Subject.

A child, only three days old, was suddenly seized with a swelling in both eyelids ; and which was attended with a considerable discharge of matter. The disorder continued in this state for a month, without the least abatement. During that time, nothing more was done, than washing the outside of the lids with Rose-water and Tutty, squeezed through a sponge. As this was found ineffectual, the case came under my inspection ; when I immediately washed off the matter, which was lodged on the globe, with the Aqua Camphorata, properly diluted, and injected through

through a syringe ; directing the repetition of the same, every hour. In a day's time, the swelling and discharge evidently abated ; and, the same applications being continued, with the occasional use of Rhubarb and Magnesia, to keep the child's body open ; both the eyes were completely cured, in less than three weeks after.

C A S E XVI.

Purulent Eyes with Specks.

The eyelids of another child, on the ninth day from its birth, began to swell ; and, on the tenth, discharged a great quantity of matter. The apothecary of the family immediately applied a large blister to the back ; and a lotion and ointment were used to wash, and anoint, the outside of the lids. The blister discharged freely ; and, for short intervals, the appearances were very promising : but, not continuing, two more blisters were applied behind the ears,

ears, which produced no more lasting benefit than the first. At the end of five weeks, the disorder was as violent as ever. Mr. Wathen was then called in, by whose direction, the diluted Aqua Camphorata was injected, and repeated every hour. The same night, the child opened its eyelids, which it had not been able to do, since the first appearance of the disorder; but, several days elapsed, before the eyes could be distinguished; the child, as was natural in that state, keeping them closed, by way of defence against the light, and the lids becoming everted, on every attempt to separate them with the finger. When they were first seen, the Cornea of both appeared to be entirely clouded over, and a small white spot was perceived on each. The same treatment was continued a month; towards the end of which, one drop of the Thebaic Tincture was dropped into the eye, every day. The discharge, at that period, entirely ceased;—the eyes acquired their natural clearness;—the specks gradually

gradually lessened, and soon became transparent;—and the complaint returned no more.

C A S E XVII.

Purulent Eye, with Discharge of both Blood and Matter.

A child was first seized, like the former, when about a week old, with a considerable swelling of the eyelids, attended with a great discharge of matter. After three days, instead of matter, pure blood continually issued out. Fomentations and ointments were carefully applied, for a week, by advice of an apothecary; who, finding no amendment in that time, gave it as his opinion, that the eyes were lost; and desired other assistance might be called in. I proposed the diluted Aqua Camphorata, and immediately injected it. It was repeated every hour; and, the next day, the hæmorrhage ceased; but was followed

followed with a return of the matter, which continued to discharge in a great quantity. The same lotion was regularly injected; the body was kept constantly open with Magnesia; and the discharge from two large blisters, which had been put behind the ears, was preserved by the use of the Epispastic Ointment. At the end of three weeks, the discharge ceased, and the eyes were apparently well; but, from the child's taking a fresh cold, or from some unknown cause, the disorder returned with much violence, which rendered it necessary to repeat the same application a fortnight longer; when both the eyes were perfectly recovered, and neither had any relapse.

CASE

C A S E XVIII.

The Purulency, violent and obstinate, accompanied with Everſion of the Lids.

The laſt caſe I ſhall relate, under this claſs, is of a child, who, four days after its birth, was attacked with a ſwelling of the left eyelids, which increaſed rapidly, till it became of the ſize of a large walnut: the right eyelids alſo ſwelled, at the ſame time, in a ſmaller degree; and, the day following, a very large quantity of matter was diſcharged from between both of them. When the left eyelids were ſeparated from each other, the appearance very much reſembled a deep wound, filled with matter. By advice of the midwife, a mixture of pariſley and hog's-lard was firſt applied; but, the child continuing to be in extreme pain, it was ſoon changed for a poultice of bread and milk. By the ſame advice, the lids were afterwards fo-

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mented

mented with a decoction of poppy heads ; and a large blister was applied to the back. The discharge, notwithstanding, continued very profuse ; and, at the end of a fortnight, the upper lid of the left eye became everted, whenever the child cried ; but returned to its natural state, when the crying ceased. At first, the eversion was only of a small part of the lid ; but soon increased, till it became entire. The Tunica Conjunctiva, on the inside of this lid, was also very much swelled, and appeared of a deep red colour. In a short time, the eversion was so confirmed, as to continue, through the day, in the same state ; and much resembled, (as Mr. Warner has expressed it) an inverted *Intestinum Rectum*. It was at this advanced degree of the disorder, that I first saw the child. I directly applied, as in the former cases, the Aqua Camphorata, ordering a repetition of it every hour ; and particularly recommending, that, at each washing, the matter might be entirely cleared away. A poultice, made with the alum
curds

curds and hog's-lard, was applied to the lids, at bed-time; when, a table spoonful of the syrup of poppies was also given, to procure rest, which it did for several hours. The discharge soon became less, but the eversion continued; on which account, the lid was returned with the finger, and graduated compresses, dipt in the camphorated lotion, were applied over it, so as to make a constant gentle pressure. The compresses did not succeed, as I could; with and the eversion often took place, notwithstanding their application; a finger was, therefore, directed to be kept more constantly on the lid, till it was perfectly restored. The child was bled with two leeches, and blistered, on each temple; gentle purges were frequently administered; and the Thebaic Tincture was daily dropped into the eye. The finger was kept on the compresses, wetted as often as necessary, with as few intermissions as possible, for a week; at the end of which, the habit was so far overcome, as not to be constant, though

it still happened, whenever the child cried. The camphorated lotion being regularly continued, the discharge gradually abated; and, at the end of two months, the swelling, discharge, and everfion, were entirely cured, and the eyes became perfectly found and clear.

The utility of the means recommended is, I think, sufficiently proved, by the cases above recited; to which, were it necessary, many other similar ones might be added. At the same time, I am free to acknowledge, that I have not always met with the same success: but, to do justice to the proposed remedies, I must observe, as to the instances, in which they have been found to fail, that the disorder had been suffered to acquire considerable strength, by delay; and, in all those cases, I think it highly probable, that an early application would have been no less effectual, than in those I have related. The want of success, therefore, in the exceptions

tions made, does, in fact, prove nothing more, than the great danger of delay.

Though the three disorders, which have been the subjects of the preceding remarks, are distinct in themselves, and required a separate description, in order to their being rightly understood, and properly treated: it is, nevertheless, equally true, that they are often so combined with each other, as to prevent the possibility of distinguishing, at first sight, which of them was the original complaint. For instance, the Ophthalmy is often occasioned by the Pforophthalmy: but, before proper advice is taken, it is commonly found, that the Ophthalmy has been suffered to predominate, in so considerable a degree, as to prevent an accurate inspection of the ciliary glands, and, of course, coming to any certainty, as to the existence of the Pforophthalmy. The inflammation of the eye, however, though it may not have been the original, is certainly the principal, complaint in all
such

such subjects, whether young or old ; and therefore requires the primary and closest attention. When the violence of the Ophthalmy is abated, the disorder of the lids will, of course, become more evident, and point out the treatment more peculiarly suitable to it : and, without the application of the latter, it will be found very difficult, if not impossible, to complete the cure. Again, in cases of the purulent eye, the inflammation will often be found very considerable ; and require, not only the use of the means pointed out in treating on that subject, but also those others, which have been prescribed for the cure of the Ophthalmy. In the above Remarks, my only design is, to suggest a reason for the occasional use of the Thebaic Tincture, leeches, blisters, &c. in cases that are yet properly classed, under the title of the Pforophthalmy, and Purulent Eye.

Case

*Case of a Gutta Serena, cured by
the Use of Electricity.*

THE use of Electricity, for the cure of obstinate disorders, has long been practised: but, at the same time, it will hardly be denied, that the application has, for the most part, been made by persons, who were very little acquainted, either with the texture of the human frame, or the disorders to which it was subject; and who, indeed, had no other knowledge even of electricity itself, but what they derived from a few common experiments. In such hands, no considerable improvement was to be expected. Yet, the most eminent of the faculty have ever considered the electric fire, by means of the wonderful properties, of its subtilty and activity, as capable of being rendered extremely serviceable, under many complaints, to which the human body is subject: particularly, in cases of obstruction

tion and relaxation ; by acting as a deobstruent in the former, and as a stimulus in the latter. Practitioners of this class will candidly receive any information, that may tend to clear or enlarge the view of this interesting subject ; or to establish the utility of so simple and easy an application.

With this design, I have inserted the following case, which is a remarkable proof of its efficacy, in an incipient Gutta Serena.

A young woman, at about the age of seventeen, was seized with a pain in her teeth and jaw, which, two days after, produced a considerable swelling in the face. These symptoms, however, went off, in a very short time : but they were no sooner gone, than she found she was unable to open the left eyelids ; and the following day, the right lids also were affected in the same manner. An apothecary was then consulted. He, supposing that an adhesion was produced, by gum sticking between the edges of the
lids,

lids, recommended an ointment to soften it: but, as this had no effect, he separated the lids with his fingers; when he was much surprized to find, that the sight of both eyes was entirely lost. In this situation I first saw her. There was no apparent inflammation in either eye: but the Pupils of both were very much enlarged; and the Iris had only a very small degree of contraction. I applied the Thebaic Tincture, hoping that the stimulus which it usually gives, might excite the optic nerve to its proper action. The next day Mr. Wathen saw her: when the eyes continued exactly in the same state, as they were on the preceding. He advised, that the tincture should be applied again; that she should be bled with three leeches, and then blistered on both temples. As no leeches could be procured, owing to the extreme coldness of the weather, three ounces of blood were taken from the temples, by cupping; after which, a blister was applied to each; and the discharge from them not being thought sufficient,

two additional ones were afterwards put behind the ears. Notwithstanding all these vigorous exertions, the disorder did not appear to give way, in the smallest degree. The patient continued still unable to open the lids herself; and when, with the assistance of the fingers, they were separated, it was found that she was, at present, wholly deprived of sight, in both eyes. At this extremity of the disorder, having conferred with Mr. Wathen, I, by his consent, electrified the left eye for a quarter of an hour; first, by carrying a stream of the electric fire through the eye, and, afterwards, by drawing sparks from all the parts which surrounded it. In the evening of that day, she perceived no amendment; but, the next morning, she could open the left eyelids with ease, and distinguish clearly all the objects which surrounded her. The benefit did not, however, as yet, extend to the right eye or lids. I therefore electrified this eye, exactly in the same manner, and for the same length of time, as I had done the other. The
confe-

consequence was, that, on the next day, the patient had so far the use of the right eye, as to be capable of distinguishing large objects; though not with the same clearness, as she did with the left. That night, she complained that her head felt very heavy. On the day following, therefore, I passed a stream of the electric fire through both eyes, and drew sparks from them; which I also accompanied with the application of small shocks through the head in different directions. The application gave her more pain than it had done before; but succeeded in the happiest manner: for, on the fourth day, she opened both eyes with perfect ease, and saw very distinctly. I thought it unnecessary to electrify her again, or to do any thing more, than order an opening medicine; which entirely removed the heaviness she complained of in the head; and her sight was perfectly restored.

I have only to remark on the above cure, which was compleated by only three electric applications, that it differs from those

related by Mr. Hey *, in the following material circumstances:—the disorder came on more suddenly, than in the cases described by that author;—the temporary blindness was more entire;—the eyelids were more affected;—and the cure more speedy.

* See 5th Vol. of Lond. Med. Obs.

F I N I S.

E R R A T A.

- Page 5. l. 21. for *seperated* read *separated*.
 — 24. l. 4. for *was* read *has*.
 — 38. l. 20. for *admitted* read *admitted*.
 — 52. l. 9. for *them* read *it*.
 — 64. l. 4. *Case I. to be read before the title.*

